# 53-506 Einführung in die Linguistik Introduction to English Linguistics

Dr. Martin Schweinberger





#### Overview

Seminar Ia	
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Day/time (+ 2h Tutorial)	room
Office hours	room/day/time (register via e-mail)
Tutorium 1	
Tutor 1	email
Day/time	room
Tutorium 2	
Tutor 2	email
Day/time	room



#### Overview

#### Course description

► This course will introduce students to the basic concepts and methods in the study and description of language. We shall be looking at the basic levels of linguistic analysis such as phonetics and phonology, morphology, syntax, semantics and pragmatics. We will also be looking into where these overlap and briefly address where linguistics cuts into other academic disciplines. The course will be taught in English.



#### Formal requirements

To pass this course, you have to...

- ▶ be signed up for this(!) course on STiNE
- ▶ attend the classes (you may miss 15 percent of the classes);
- attend one of the tutorials that accompany this course (you may miss 15 percent of the tutorials);
- sign in to "Introduction to English Linguistics" on AGORA (password: intro);
- sign up for the final exam on STiNE and pass the final exam.

If you fail to meet these requirements, you will not pass this course (this will count as a "Fehlversuch").



#### **Tutorials**

► Tutorials help you understand the course content and they prepare you for the final exam.

Exercise/ work sheets . . .

- ► NOT graded or corrected
- help you understand the course content and they prepare you for the final exam.



#### Recommendations

► Martin Hilpert (a linguist who also studied English Linguistics at Hamburg University) uploaded his videos showing his lecture "Intro to English linguistics" to YouTube (I highly recommend it!):

https://www.youtube.com/playlist?list=PLKgdsSsfw-fYCJ90tLikJRbXv174g6FUw

#### Literature

- ► The literature serves as a guide BUT what counts is what I teach here in class and what is in the materials I designed for this course(!).
- ▶ Introductory books I recommend are Plag et al. (2020), Berg (2013), Meyer et al. (2010), Fromkin et al. (2013), and Kortmann (2020).



Session	Date	Topic
1	TBA	Formalities and overview
2	TBA	Language and the Brain
3	TBA	History of the English Language
4	TBA	Phonetics: Phones and Phonemes
5	TBA	Phonology: Allophony and Syllables
6	TBA	Morphology: Building Meaningful Blocks
7	TBA	Syntax: Word Classes and Phrases
8	TBA	Syntax: Sentence Structure and Semantic Roles
9	TBA	Semantics: The Classical View
10	TBA	Semantics: Prototypes and Categorization
11	TBA	Pragmatics: Language in the Real World
12	TBA	Sociolinguistics and Language Change
13	TBA	Language Acquisition and Language Learning



#### Overview

Levels of linguistic analysis			
Semiotics	study of signs		
Phonetics Phonology Morphology Syntax Semantics	study of sound production, properties, and perception study of sound systems and interaction study of word structure and formation study of sentence structure study of meaning	Microlinguistics	
Pragmatics Sociolinguistics/Language Change Psycho-linguistics	study of meaning in context study of variation in language study of language and mind/brain		



Overview Microlinguistics



## Phonetics and Phonology

Phonetics: study of sounds

Phonology: study of sound systems and sound interaction

- ► How do we produce sounds?

  - ► lɔːrnɔːdə <law and order> (sounds like "Laura Norder")
  - ▶ Dialect refers to differences on all levels of grammar, i.e. lexicon, morphology, syntax.
- ▶ What makes someone sound "German"?



#### Morphology

Morphology is the study of word structure

- ► What is a word?
- ► Sehirlilestiremediklerimizdensiniz.
  - (1) Sehir- li- les- tir- eme- dik- lertown- s/o.from become cause.to can't whom those
    imiz- den- siniz
    we one.of you.are
    - You are one of those whom we can't turn into a town-dweller (Deutscher 2010: 24)
- ► Internal structure, e.g. disgraceful: dis#grace#ful
- ▶ Word formation: How do we "form" (new) words?



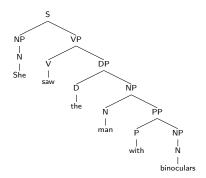
#### Syntax

Syntax is the study of sentence structure

- ► How do we combine words?
  - (2) I like apples and bananas.
  - (3) ?Apples I like and bananas.
  - (4) \*Like bananas apples I and.
- ► Lexical and structural ambiguity:
  - (5) She saw the man with binoculars.
  - (6) Time flies like an arrow. Fruit flies like a banana.

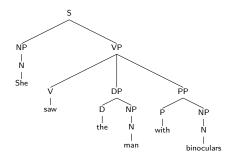


## Syntax





# Syntax





#### **Semantics**

Semantics is the study of meaning (relationships) Features versus Prototypes

- ► Name 3 birds.
- ► Name 3 tools.
- ► Name 3 colors.



#### **Semantics**

Semantics is the study of meaning (relationships) Features versus Prototypes

- ► Name 3 birds.
- ► Name 3 tools.
- ► Name 3 colors.

All of you had sparrow/pigeon, hammer/screwdriver, or red/blue.



## Pragmatics (not microlinguistics)

Pragmatics is the study of meaning in context What is meant by what is said?

- ► Can you take out the trash?
- ► It's warm in here.
- ► I wouldn't do that!

In all three cases, the literal meaning deviates from the intended message.



## What is Language?



Discuss in groups of five. . .

- ► What is language?
- ▶ Dialect and accent: provide a brief definition for each.
- ► Guess how many languages there are today?



## What is Language?

Discuss in groups of five. . .

- ► What is language?

  Language is a

  conventionalized and

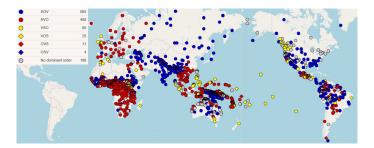
  structured system of visual, auditory, or tactile symbols

  (arbitrary signs) used in human communication.
- ▶ Dialect and accent: provide a brief definition for each. Accent refers to differences in pronunciation only, while dialect refers to differences in lexis, morphology, and syntactical structures.
- ► Guess how many languages there are today? App. 6,000 (depending on what counts as a "language")



## Exploring the World's languages

The World Atlas of Language Structures (WALS) is a large database of structural properties of 2,679 languages gathered from descriptive materials (http://wals.info/).



Dr. Martin Schweinberger 20



#### What is Language?

Language is a conventionalized hierarchically-structured system of visual, auditory, or tactile symbols (arbitrary signs) used in human communication.

- ► Human language differs from animal communication.
- Only humans use language.
- ► All human cultures use language.
- Every child learns language.
- ► Language is handled by certain parts of the brain.
- ► All languages share certain features.
- ► All languages have certain regularities (grammar: word order).



## What is Language?

Language is a system of visual, auditory, or tactile symbols (arbitrary signs) used in human communication and the rules used to manipulate them.

- ► Language is social.
- ► Living languages always change.
- ► All languages are related.
- ► Language is creative.

. . .



## Language and Communication

Human language vs. animal communication

- ► But don't animals communicate too?
- ▶ What is so different about human communication?
- ► How do we differentiate between a dog's bark, a bee dance and human communication?
- ► Kanzi!



https://www.youtube.com/watch?v=2Dhc2zePJFE



#### Features of Language

- ► Displacement
  - Momentary and immediate meaning ≠ ability to refer to past and/or future. (bee communication?)
- ► Arbitrariness
  - ► Usually no natural connection between a linguistic form and its meaning. Relation is arbitrary (willkürlich), not iconic. (onomatopoeia? kikiriki)
- ► Productivity
  - Humans are frequently creating new expressions to refer to novel experiences, objects, or events. (bees: cannot communicate vertical distance).

Semiotics



#### Features of Language

- ► Traditional transmission
  - ► Genetic acquisition and traditional transmission.
  - Korean infant will speak English, if adopted by L1 English speakers.
  - ► Some animals are born with a distinct set of signals that they produce instinctively (cat: meow).
- ▶ Duality
  - ► Language is organized at two levels simultaneously.
  - ► Level of physical production of distinct sounds (this is the form side) and the level of meaning (that for which the sounds stand).

Semiotics



## Linguistics and Semiotics

#### Linguistics

► Linguistics is the scientific study of systems of symbols, i.e. of language or particular languages, and of their rules (grammar) used by humans to communicate and express ideas and feelings.

#### Semiotics

Semiotics is the scientific study of signs, sign systems of and sign processes in general, i.e. not restricted to verbal, human signs.



## Semiotics and Signs





#### Signs

- ► A sign is sth. that stands for sth. else: aliquid stat pro aliquo
- ► Form
  - ► Sound pattern, gesture, picture, writing, fashion, hair cut, ...
- ► Function
  - ► Meaning, concept, mental representation

I will be here tomorrow.





## Types of Signs

Index ("pointing towards")

► Here, there, I, him, that...etc. (note: there is still a symbolic/conventional element: ich, moi, lui etc.)

#### Icon (similarity)

- ▶ Onomatopoeia ("Lautmalerei")
   E.g. splash, crash, swoosh; that movie was so boooooring.
- These are very rare examples and context- and culture-specific.

#### Symbol (arbitrariness)

► Most of language is symbolic; i.e. conventionalized and has to be learned.



- ► Ferdinand de Saussure (1857-1913; Swiss linguist)
  - Contemporary linguistics is, to a large extend, still based on concepts developed by him.
  - ► His main ideas were published post humously from his lecture materials (1916) under the title "Cours de linguistique générale" (Course in General Linguistics).
  - ► He can be considered the founder of modern linguistics.
  - ► His school of thought is referred to as "Structuralism" (he is still an important figure in structuralist thought)





- ► Ferdinand de Saussure (1857-1913; Swiss linguist)
  - ► Introduced the distinction between . . .
    - Synchronic linguistics (study of language at a certain time)
    - Diachronic linguistics (study of language change over time)
  - ► Introduced the "primacy of the spoken word"
  - Shift away from a purely diachronic perspective to a focus on synchronic language use.
  - ► Fostered the transition from the prescriptive period to descriptive approach towards language.





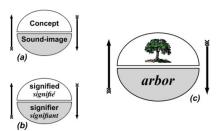
- ► Ferdinand de Saussure (1857-1913; Swiss linguist)
  - ► Focus on the structure of language.
  - ► Language system (langue) is the center of study, not the concrete language use (parole).
  - ► Principle of Arbitrariness
    - There is no internal link between a sound pattern and the meaning of a concept!
  - ► The concept of a dog is represented by different sound patterns depending on the linguistic code used to refer to a dog and, thus, depends upon social convention.



Semiotics



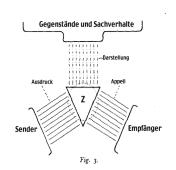
- ► Ferdinand de Saussure (1857-1913; Swiss linguist)
  - ► Each linguistic sign (word) consists out of a sound sequence (signifier) and a concept (signified)
  - ► The relationship between the sound sequence and the concept of a linguistic sign is arbitrary and depends upon social convention.





## Bühler's "Organon Model"

- ► Karl Bühler (1879-1963)
  - approached language by examining the (possible) functions of language.
  - ► Father of "Functionalism"
  - ► The "Organon Model" is a functional description of sign usage/communication.
  - ► Function(s) of language according to Bühler
    - expressive function (express feelings/beliefs)
    - representative function (talk about the world)
    - ► appellative function (e.g. make a request).







#### Table of Contents

Overview

Semiotic

#### Language and the Brain

History of English

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Filoliology

Morphology

Sylliax

Semantics

Semantics

Pragmatics

Sociolinguistics and Language Change

Language Acquisition and Language Learning



## Language and the Brain

#### Today's topics and terms

- Aphasia
- ► Language area
- Critical period and plasticity
- ► Priming (Persistence)
- ► (Language acquisition)



### Language and the Brain

#### Localizationism

- ► Brain consist of compartmentalized and specialized areas called "modules"
- Modules are specialized neurons in certain regions dealing with simpler tasks (e.g. exclusively language-related tasks)

### Connectionism (holism)

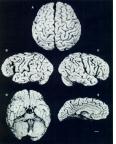
- ► Language related abilities are carried out by larger parts of the brain
- ► Focus on how language is dependent on other, broader cognitive abilities (memory, abstract thinking, attention,...)
- ► No language centers but "network nodes"



### Localizationism

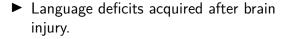
- ► Paul Broca (1824-1880)
- ► Brain has two hemispheres
- ▶ "Damage to the left hemisphere is more strongly correlated with language impairment than damage to the right hemisphere."
- ► Is there a language module in the left hemisphere?

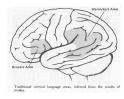






# Language impairments (aphasia)





- Some aphasiacs perform normal on non-verbal tests of IQ, they have neither trouble cooking, nor walking a complex route home.
- ► Aphasias are caused by damage to certain regions of the left hemisphere (language area)
- ➤ Different symptoms correspond to different regions being impaired:
  - more to the front: speech production.
  - ▶ more to the back: comprehension.





https://www.youtube.com/watch?v=JS7tPD6tjuw 1:35-4:00



## Broca's aphasia

► In 1861, Broca presented data from a patient called Tan Tan. Tan could say this one syllable ("tan") and repeated it if asked to, but seemed surprised that he couldn't get his message across. Tan's comprehension was in fact good.



- ▶ Postmortem examination showed a brain lesion at the lower areas of the frontal lobe (Broca's region)
- Symptoms
  - ▶ slow, deliberate, effortful, omission of grammatical markers (e.g. "Boy go store" instead of "The boy has gone to the store")





https://www.youtube.com/watch?v=dKTdMV6cOZw



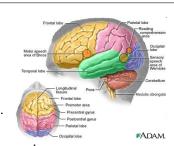
## Wernicke's aphasia

- ► 1874, Carl Wernicke presented data of two patients whose symptoms were quite unlike Tan's.
- ► Speech was fluent (good intonation), but contained unusual semantic features (circumlocutions, phonemic substitutions, neologisms).
- ► Comprehension was severely impaired.
- ► Lesion was situated at the back and top of the temporal lobe (Wernicke area).
- Symptoms
  - ► fluent, normal use of grammatical markers, mis-selection of words ("wine" for "why"), lack of meaningful content



## Anomic aphasia

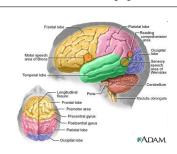
- All aphasiacs have anomia of some kind, i.e. problems remembering the names of things.
- ► In 1993, cognitive psychologist
  Ashcraft experienced a temporal anomia.
  - ► temporarily unable to remember the names of things he frequently used or referred to.
- ► Caused by small lesions (little strokes) within the language area (anterior left temporal lobe).
  - ► Syntax remains unimpaired and comprehension is quite spared, difficulty finding specific substantive words.





### Other aphasias

- ► Conduction aphasia
  - Inability to repeat spoken language, but only little comprehension and/or production difficulty.
- ▶ Pure word deafness
  - ► Inability to make sense of language.
- ► Transcortical motor aphasia
  - ▶ Patients will use fragmentary or little language.
  - ▶ Repetition; grammar and comprehension are spared.
- ► Transcortical sensory aphasia
  - ► Poor comprehension, but fluent, semantically empty speech.





# Language impairments (aphasia)

- ► Different aphasias are linked to damage in different brain areas of the central left hemisphere
  - Problems in coming up with lexical items (words): mild damages in the language area around the Sylvian fissure.
  - ► Problems producing language sounds correctly and generating syntactic strings are connected with lesions in anterior brain regions (Broca's area).
  - ► Problems with comprehension and "empty speech" are associated with Wernicke's area.
  - ► Problems with repetition result from damage to area between Broca's and Wernicke's area.



We have gained knowledge about the language areas from aphasias.

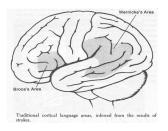
BUT

Which other ways of finding out where certain abilities are performed do we have?



## Detecting brain activity

- ► Cortical Stimulation
  - ► Putting electrodes into brains and stimulating certain regions, then asking the subjects what they experienced or describing what behavior they exhibited.



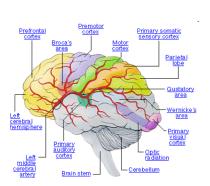
- ► PET scans (Positron Emission Tomography)
  - ► Shows brain activation during certain tasks
- CAT-scans (Computerized Axial Tomography)
- ► MRIs (Magnetic resonance Imaging)

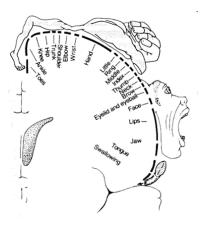


Nerve cells both in the cortical structure [surface of the brain] and the subcortical [inner] areas of the hemispheres of the brain are involved in both producing and understanding language. Within the left hemisphere, a "language area" can be delimited that includes areas right next to the primary motor areas of the brain [parts responsible for triggering muscular movement and the primary sensory areas [sensing and feeling], as well as areas further back involved in taking in information presented either visually or auditorially. (Obler and Gjerlow 1999: 26)



## Regions of the brain







Which other kinds of evidence indicate that the left hemisphere is dominant?



## Left-hemisphere dominance for language

- ► Wada test
  - ► Anesthetizing one brain-hemisphere so subjects cannot speak for several minutes (sound like aphasics a few minutes after that)
- ► Tachistoscopic presentation
  - Visual stimuli are presented to one eye (hemisphere/-field) only (error rate and speed of response)
- ► Dichotic listening technique
  - ▶ Different auditory stimuli presented to both ears (error rate of dominant hemisphere is lower)



# Left-hemisphere dominance for language

### Split brain patients

- Connection between hemispheres is severed. Patients cannot name objects they don't see but feel with their left hand.
- ► BUT patients can name them if they don't see them but feel them with their right hand (left hemisphere!)





https://www.youtube.com/watch?v=ZMLzP1VCANo



### The critical period

- Children are not born with fully developed linguistic abilities.
- ▶ Lateralisation
  - One-sidedness process begins in early childhood and lasts until puberty
- During lateralisation the human brain is most ready to receive input and learn a particular language. This phase is called critical period.
- ► Birds have it as well!
- ► Neurons grow dendrites and synapses. If dendrites are not activated, they "dry up".



#### Genie

- ▶ 1970, a girl of 13 called Genie was admitted to a hospital in Los Angeles.
- ▶ Genie spent most of her life in a small closed room, basically without linguistic input (only mother came to her every day for a few minutes to deliver food). The linguistic ability of Genie was immensely underdeveloped basically she couldn't use language. After a short while she began to imitate sounds and managed to acquire limited linguistic abilities (speaking and understanding a fair amount of English words).



#### Genie

- ► Genie never managed to form grammatically complex sentences!
- ► She had no "left sphere language facility"!
- Genie was using the right hemisphere for language functions (dichotic listening test).
- During speech acquisition Genie went through the same phases "normal" children go through during speech and language acquisition.



#### Mental lexicon

- ► We can infer from certain phenomena how our mental lexicon is organized (e.g. tip of the tongue phenomenon, slip of the tongue).
- ► The mental lexicon contains all our concepts and the words they are denoted.
- ▶ It also provides information about how these words are related to others, e.g. antonymic relation (opposition): hot - cold; hyperonymy and hyponymy (superordinate/subordinate relation): fruit - orange; rhyme (similar phonological properties): lime, mine, fine

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### Tip of the tongue phenomenon

- ► The feeling that we know a word but just cannot "find" it momentarily. Sometimes we know how the word sounds, how many syllables it has, with which letter it begins, or with which words it rhymes.
- Speakers produced sectant, sextet, sexton when asked to name a particular type of navigational instrument (sextant).
- Others said fire distinguisher instead of fire extinguisher or transcendental medication instead of transcendental meditation.
- ► malapropisms: "near misses"



#### Mental lexicon

- ► Slip of the tongue phenomenon (Spoonerisms)
  - ► William Spooner (Oxford Anglican clergyman)
    - ▶ "You have hissed all my mystery lectures".
  - ► (Initial) sounds or words are interchanged:
    - "Long shory stort", "use the door to open the key", "fifty-pound dog of bag food", "beel fetter", "stick neff"
  - Commonly treated as errors of articulation but they are rather slips of the brain as it tries to organize linguistic messages.



### Table of Contents

Overview

Semiotics

Language and the Brain

### History of English

Phonetics

Phonology

Morphology

Syntax

Semantics

**Semantics** 

Pragmatics

Sociolinguistics and Language Change

Language Acquisition and Language Learning



## Today's topics and terms

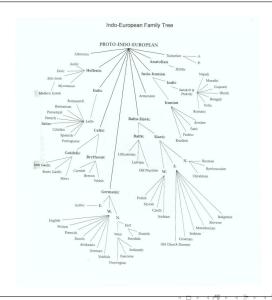
- ► Family tree and Comparative Reconstruction
- ► Diachronic linguistics
  - ► Old English
  - ► Middle English
  - ► Early Modern English
  - ► Modern English
  - ► (Present day English)



### Family tree

- ➤ Similar features indicates that both Latin and Greek are descendants of Sanskrit.
  - ▶ The Sanskrit language, whatever be its antiquity, is of a wonderful structure, more perfect than the Greek, more copious than the Latin, and more exquisitely refined than either, yet bearing to both of them a stronger affinity, both in roots of verbs and in the forms of grammar, than could possibly have been produced by accident. (Sir William Jones a British government official in India 1796; quoted from Yule 2006: 182)
- ▶ During 19th century linguists inferred that there existed a language that was the common ancestor of most languages in India and Europe about 4000 BC: (Proto-) Indo-European.







## Family connections

- ► Relation between Italian and Hindi?
- Taking a look at earlier forms of languages (Latin and Sanskrit)

Sanskrit	Latin	Ancient Greek	Translation
pitar	pater	pater	father
bhratar	frater	phrather	brother



### Cognates

➤ Similar form of words in different languages that have a similar meaning and originate from the same word.

$$\begin{array}{cccc} & < mother > & < Mutter > \\ English & < father > & _{are\ cognates\ of} & < Vater > & German \\ & < friend > & < Freund > & \end{array}$$

► Inference: Modern English and Modern German probably have a common ancestor.



### Comparative reconstruction

- ► Procedure employing cognates to reconstruct the original or proto-form in the common ancestral language:
  - ► Majority principle
    - ▶ If, in a cognate set, three words begin with a "p" and one with a "b", probably the majority has retained the original initial whereas the minority has changed.
  - ► Most natural development principle
    - Some sound changes are very common, others quite unlikely.
    - 1. Final vowel often disappears: vino  $\longrightarrow$  vin
    - 2. Voiceless sounds become voiced (typically between vowels): muta  $\longrightarrow$  muda
    - 3. stops become fricatives: ripa  $\longrightarrow$  riva
    - Consonants become voiceless at the end of words:



### Sound reconstruction

	Languages		
Α	В	C	<b>Translation</b>
cantare	cantar	chanter	("sing")
catena	cadena	chaine	("chain")
caro	caro	cher	("dear")
cavallo	caballo	cheval	("horse")

- ▶ A and B begin with a [k] while C is the only one beginning with  $[\int]$ .
- ▶ Initial sound [k] in A and B is probably older than  $[\int]$  in C.
- Most natural development principle supports the hypothesis that Latin is the common ancestor: cantare, catena, carus, caballus  $\longrightarrow$  [k]



### Word reconstruction

	Languages			
Α	В	C	Protoform	Translation
mube	mupe	mup	?	("stream")
abadi	apati	apat	?	(,,rock")
agana	akana	akan	?	("knife")
enugu	enuku	enuk	?	("dia-
				mond")

► What are the protoforms/which language is the most archaic?



### Diachronic linguistics

### Language change over time

- ► Earlier forms of English differ substantially from modern English
- ► Internal factors for language change For instance, one vowel shifts because another vowel has moved/changed/disappeared.
- External factors for language change For instance, an enormous influx of new lexemes because of language contact (Viking settlements, Norman Conquest).



### The Lord's Prayer through time

- ► Fæder ure þu þe eart on heofonum; Si þin nama gehalgod to becume þin rice gewurþe ðin willa on eorðan swa swa on heofonum. (Old English, c.1100)
- Oure fadir that art in heuenes, halewid be thi name; thi kyndoom come to; be thi wille don in erthe as in heuene.
   (Middle English, c.1380)
- ► Our Father which art in heauen, hallowed be thy Name. Thy kingdome come. Thy will be done euen in earth, as it is in heauen. (Early Modern English, 1602)
- ➤ Our Father, who art in heaven, Hallowed be thy Name. Thy kingdom come. Thy will be done, On earth as it is in heaven. (Modern English, 1928)
- Our Father in Heaven, let your holy name be known, let your kingdom come, and your will be done, on earth as in heaven. (Modern/Contemporary English, 1970)



# Pre-English (before 450)

- ► The first linguistic evidence from Britain shows that by the time the Romans arrived, Celtic languages such as Welsh or Kumric were spoken across Britain.
- ► Some traces of the original Celtic languages are preserved in certain place names
- ▶ 43-410 Romans came to England and Latin became the official language
- ► Latin (of that period) had a very weak influence on the development of the English language



- Germanic tribes arrive in England from the middle of the 5th century
  - Angles
  - Saxons
  - ► Jutes and Frisians
- Germanic word-stock is preserved in basic terms



(7) man: mann, woman: wif, child: cild, house: hus, food: mete, eat: etan, drink: drincan, fight: feohtan. etc.



▶ Determiners, adjectives and nouns were fully inflected and word order did not matter (as much).

► The king : se cyning of the king : thaes cyninges to the king : thaem cyninge

"Se cyning meteth thone biscop" = "Thone biscop meteth se cyning"  $\,$ 

"The king meets the bishop"  $\neq$  "The bishop meets the king"





https://www.youtube.com/watch?v=DuyEXotPRxM 1:35-2:21



- ► Germanic was fully inflected (like modern German)
- ► Four major dialects
  - West Saxon (most texts that were preserved are written in West Saxon)
  - ► Kentish
  - ► Anglian
  - ► Mercian (plus Northumbrian)





- Germanic tribes were pagans as we can still detect in English weekdays (Woden and Thor).
- ► From the sixth to the eighth century the Anglo-Saxons were converted to Christianity.
- ► Latin (language of religion) came to influence English
  - (8) angel, bishop, candle, church, martyr, priest, school, . . .



#### Old English and Old Norse

- ► From the eighth through the 9<sup>th</sup> and 10<sup>th</sup> century a northern European tribe, the Vikings, came to England, at first to plunder, then to settle.
- ▶ Beginning their invasion in 793, they had conquered almost all of Britain by 878 when Alfred the Great won in a last attempt withstand the invasion.





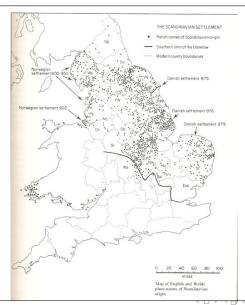
#### Old English and Old Norse

A peace treaty was signed which lead to a division of England into a part ruled by the Danes (the Danelaw) and the Wessex (the only Saxon kingdom left).



- ► Had Alfred not won, Britain would be speaking a Scandinavian language today.
- ▶ Old Norse, the language of the Vikings, is still visible in PDE, e.g. in place (-by) and family names (X-son) but also give, law, leg, skin, sky, take, and they.







## Middle English (1150-1500)

#### Norman Conquest in 1066

- William the Conqueror victory in Hastings
- ► French became the language of the ruling class and the language of the nobility, the government, the law, and the civilized life in England.
- Enormous influx of (Norman) French vocabulary

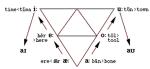


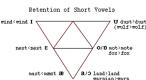


# Middle English (1150-1500)

#### The Great English Vowel Shift

- ► Leveling of inflection increases
- ► Great English Vowel Shift
- ► Major change of the English vowel system started app. 1450 and lasted until app. 1750.
- Affected all long vowels of Middle English (ME).



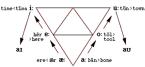


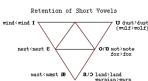


# Middle English (1150-1500)

#### The Great English Vowel Shift

- ► Long vowels
  - ▶ raised or diphthongized
  - ► long [oː] in ME fode (food) was raised to [uː],
  - ► long [iː] in ME child and lyf (life) wind or wind I was diphthongized to [ai].
- ▶ Other effects
  - Short high back rounded vowel [v] was rounded and centralised to [ʌ]; but [but] became [bʌt].







### The Great English Vowel Shift

Vowel	Chaucer	Translation	Shakespeare
<u>/iː/</u>	[fixf]	five	[faɪf]
/eː/	$[\mathrm{mexd} ext{-}\mathrm{d}$	meat	[mixt]
$/\epsilon$ !/	[klɛːnə]	clean	$[\mathrm{klexn}]$
/a:/	[naxmə]	name	[nexm]
/זנ/	[ga <b>x</b> tə]	goat	[gort]
/oː/	[sortə]	root	$[\mathtt{xuxt}]$
_/uː/	[duːn]	down	[daun]



# Early Modern English (1500-1700)

#### British expansion

- ► Introduction of printing to England in 1476 by William Caxton
- Standardization and Regulation of spelling
- Main phase of the GVS (fundamental change of the vowel system)
- ► The spread of English around the world starts with the discovery of the New World and the race for colonies and resources.



### Early Modern English (1500-1700)

#### British expansion

- ► Increase of the vocabulary
- Large-scale borrowing from Latin, Greek, French, and other European tongues
- ► First English-language dictionaries
- Most important literary influences on Early Modern English:
  - ► William Shakespeare (1564-1616)
  - ► King James Bible (1611)





# Early Modern English (1500-1700)

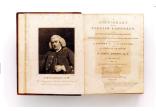
#### Renaissance

- Renewed interest in classical texts and languages.
- Enrichment of language and ideas through explorations, colonization, findings, and inventions in early forms of empirical science.
- ► While some viewed the enrichment of English by foreign vocabulary fruitful, others objected against this borrowing and spoke for a "pure" and "unmixed" English without *inkorn terms*.



#### Modern English (1700 - ...)

▶ By 1700 English has (nearly) reached its present form.



- ► Increasing standardization
- ► Samuel Johnson's Dictionary of the English Language.
- Present Day English is considered to be one kind of Modern English.
- ► Analytic language (Modern English = period of lost inflection)
- Relation of words is indicated by a relatively fixed word order.



#### Modern English (1700 - . . . )

- ► ModE's lexicon can be assigned to three different origins:
  - Germanic words that survived since OE
  - Vocabulary adopted from Latin, French and other European tongues
  - Words that have their origin in the geographical expansion of the British Empire
- ▶ Pronunciation is much the same as in EmodE
- ► Rise of Received Pronunciation in the early 20<sup>th</sup> century
- Received Pronunciation is an accent that, concerning linguistics, serves as reference in phonetics and phonology.
- At the beginning of the 21<sup>st</sup> century, the regional varieties exhibit an increase in independence and begin more and more to form their own "standards".



## English as a Global Language

- ▶ Up to 1200 English was limited to the British Isles
- ► Phases of expansion
  - ► Spreading of English across the British Isles
  - Spreading beyond the British Isles due to colonization!
- ► Native language of about 340.000.000 people
- ► 2<sup>nd</sup> language in about 60 countries
- ► Major global language



## English as a Global Language

- ► English today is the most widely used language
- ► Braj Kachru accounts for the different functions English has in different territories by introducing the model of the three circles of English.
  - ► 1st circle: English is native language
  - ▶ 2nd circle: English is second language
  - ➤ 3rd circle: English is a foreign language, but is widely understood





### English as a Global Language

- ► English is the first truly international language
- ► Its the global lingua franca (also in intra-national communication, e.g. India)
- ► Internationally and cross-culturally there are various domains where English is used as lingua franca:
  - ► Economy
  - ► Politics
  - Science
  - ► International travel
  - ► Trade and transport
  - Modern technology (computer and Internet related terminology)



#### The Future of English

- ► Former third world countries in South Asia and Africa, especially grow rapidly by economic standards and in terms of population
- ► The number of speakers in economically highly developed countries (Western culture) is by comparison in decline
- ► In the future we will probably see an increase in independence of varieties which are still regarded as "inferior" sub-varieties of English



#### The Future of English

- ► Will English be substituted by another language, e.g. Mandarin (Chinese)?
  - ► Well, we don't know, but ...
  - ► English is the established lingua franca and it appears to be rather unlikely that this will change anytime soon.
  - ► Countries were English is L2 are among those nations that gain importance (India, Philippines, Tanzania, Nigeria,...).
  - ► Pidgin and creole varieties will become more widespread and will gain prestige (accepted alternative standards)



#### The Future of English

- ► Do we need a universal language?
  - ► Between 1880 and 1907 53 universal languages were proposed (thousands throughout our attested history)
  - Most universal languages are forgotten (lack of speakers)
  - ▶ Recent history has shown language policy to be a highly emotional issue, the language of a country often symbolizing its independence and nationalism. (Baugh and Cable 1991: 7)



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#### **Phonetics**

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Semantics

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Pragmatics

Sociolinguistics and Language Change

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#### **Phonetics**

#### Today's topics and terms

- ► Types of phonetics
- ▶ Organs of speech
- ► Types of sounds (vowels and consonants)
- ► Transcription



#### **Phonetics**

Phonetics tries to determine and describe the properties of sounds used in communication.

#### Articulatory Phonetics

► How are speech sounds produced?

#### **Acoustic Phonetics**

► How do speech sounds "travel" from one person to another?

#### **Auditory Phonetics**

How do speaker and hearer perceive these sounds?

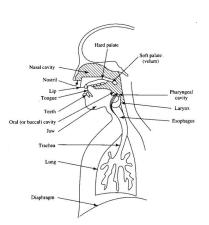






## **Articulatory Phonetics**

- Describes sounds with regard to the organs of speech
- ► Which organs of speech are involved?
- ► How are these organs manipulated?





#### **Articulatory Phonetics**

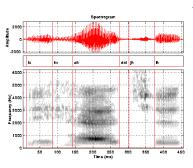
Let's do a little experiment...

- ► Touch your voice box (larynx) while you produce the first sounds of the words *zoo* and *Sue*.
- ► What do you feel?
- Now, produce vowel sounds in heed and mood in normal speech and while you whisper.
- ► What do you feel?



#### **Acoustic Phonetics**

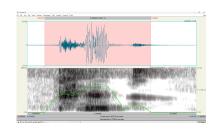
- ► What happens to the air between speaker and listener?
- Study of the acoustic properties of speech sounds
- Use of technical devices
   (e.g. sonograph) to analyze
   the frequencies that sounds consist of.





#### **Acoustic Phonetics**

Let's do a little experiment to understand speech acoustics a bit better



- ▶ We will go to Praat a software used in analysing speech acoustics
- ► And we will check the spectrograms of a few recorded words



#### **Acoustic Phonetics**

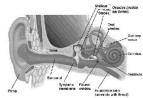
#### Homework

- ▶ Download and install Praat (https://www.fon.hum.uva.nl/praat/ download\_win.html)
- Record yourself in Praat saying the words you see on the righ:
- ➤ Open Praat, open the *New* tab and select *Record mono Sound* and then record yourself.
- Save the recording as a .wav file.
- ▶ In the tutorial, we will use the recordings to create your own personalised vowel chart (see https://ladal.edu.au/vc.html for details).

Vowel Sound	/hVd/ Word
/i:/	heed
/1/	hid
/e/	head
/æ/	had
/a:/	hard
/^/	hud
/o:/	hawed
/ʊ/	hood
/u:/	who'd
/3:/	heard
/ə/	- (unstressed)



#### **Auditory Phonetics**



- ► How are speech sounds perceived by (the ear of) the speaker and the listener?
- ► How does the brain distinguish between sounds?
- ► How much do we "need to understand"?









#### Auditory Phonetics

Let's watch a little video clip about the McGurk effect. . .

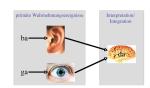


Abbildung 2.3: Der McGurk-Effekt: Auditiv wahrgenommenes [ba] plus visue wahrgenommene Sprechbewegung von "ga" führt zum Perzept /da/.



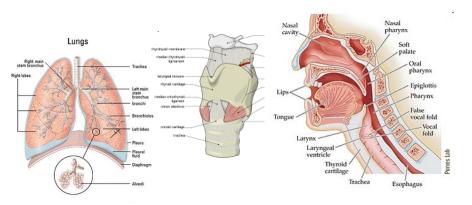
https://www.youtube.com/watch?v=2k8fHR9jKVM&t=47s

Dr. Martin Schweinberger 105



## Speech Sound Production System

Lungs Larynx (voice box) Vocal tract



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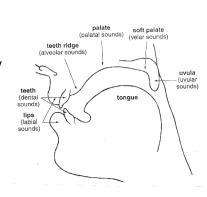
## Egressive Pulmonic Airstream Mechanism

- Mechanism that produces an air stream that is pushed up from the lungs and leaves the body through the mouth or nose.
- ▶ Produces almost all speech sounds in English with the exception of sounds which we produce when we are in emotional distress (e.g. fear) or when we are counting to ourselves.



### Organs of Speech

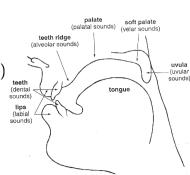
- ► The primary function of the organs of speech is/was in fact not speech itself, because the speech organs evolved primarily for . . .
  - chewing, biting, (especially teeth)
  - sucking, mouth hygiene (tongue)
  - to prevent us from choking on something (soft palate)
  - to enable us to strain (hold the breath) when we want to lift something heavy.





# Organs of Speech

- ▶ alveolar ridge (Zahndamm)
- ▶ hard palate (harter Gaumen)
- velum/soft palate (weicher Gaumen/ Gaumensegel)
- ▶ uvula (Zäpfchen)
- ▶ pharynx (Rachen)
- ► epiglottis (Stimmritze)
- ▶ larynx (Kehlkopf)
- vocal cords/folds (Stimmbänder)
- ► trachea (Luftröhre)





## Sound Categorization





#### Vowels

#### Approximants Laterals Semivowels

Consonants

	Bilabial	Labio-	Sental	Des	ttsl	Alve	olar	Post-	alveolar	Palatal	Velar	Glotta
Plosire	p b	100000			2005	t	d	100		10000000000	k g	
Affricate							483	t	d3			
Fricative		f	v	θ	δ	8	Z	8	3		(x)	b
Nasal	m					1	ì				ŋ	

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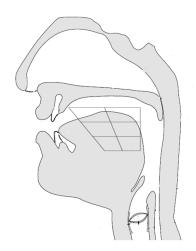


### Vowels

I	p <u>i</u> t	IC	b <u>o</u> rn
e	p <u>e</u> t	uː	b <u>oo</u> n
æ	pat	aı	bite
$\alpha$	pot	еі	bait
$\Lambda$	but	IC	boy
υ	book	$\sigma_{\Omega}$	toe
Э	mother	aυ	house
ix	bean	θū	poor
31	burn	ΙĐ	ear
ar	barn	еә	air



### Vowels

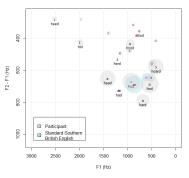




## Vowel chart project

You can have your own personalized vowel chart created.

Simply send an e-mail to VowelChartProject@gmail.com (we will send you a link to an online questionnaire and will get back to you and arrange a date for the recording)

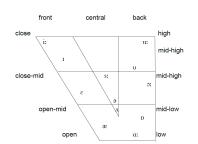


- Receive your personalized vowel chart (at the end of the semester)
- ► Receive five(!) points for the final exam!



#### Vowels

- ► Produced by . . .
  - opening the lips
  - vibrating the vocal cords
  - raising the tongue to various heights.
- Vowel sounds are produced without obstruction of the air stream.
- ► Can form the nucleus of syllables (central, pulse-bearing part of syllables).
- ► Vowels are generally more sonorous than consonants.
- ► In English, vowel sounds are always voiced.



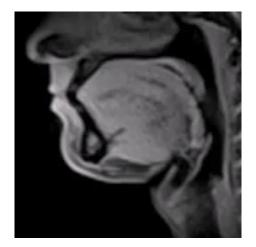


#### Vowels

#### Classification of vowels

- ► Height of the tongue high (closed), mid (mid-closed/mid-open), low (open)
- ► Position of the highest part of the tongue front, central, back
- State of lips rounded vs unrounded
- ► Length short vs long





https://www.youtube.com/watch?v=uTOhDqhCKQs



#### Consonants

▶ Produced with obstruction of the air-stream, e.g. lip against lip [m], tongue between teeth  $[\delta]$ , tongue against teeth-ridge [t] and [d], tongue against soft-palate [g], etc.

Table of En	ıglish Cor	nsonar	nts									
	Bilabial	Labic	-dental	Der	ntal	Alve	olar	Post-a	alveolar	Palatal	Velar	Glottal
Plosive	p b				- 1	t	d				k g	
Affricate					- 1			tſ	d <sub>3</sub>			
Fricative		f	v	θ	ð	s	Z	S	3		(x)	h
Nasal	m					1	ı				ŋ	
Lateral						1						
Approximant	w								r	j		j

Dr. Martin Schweinberger 117



### Consonants

p	<u>p</u> ip	3	measure
b	bib	${\bf h}$	<u>h</u> en
$\mathbf{t}$	ten	t∫	church
$\mathrm{d}$	<u>d</u> en	$d_3$	ju <u>dg</u> e
k	<u>c</u> at	$\mathbf{m}$	<u>m</u> an
g	<u>g</u> et	$\mathbf{n}$	now
f	<u>f</u> ish	ŋ	si <u>ng</u>
θ	<u>th</u> igh	1	let
ð	<u>th</u> is	$\mathbf{r}$	<u>r</u> ide
$\mathbf{S}$	<u>s</u> et	W	
${f z}$	<u>z</u> 00	j	<u>w</u> et <u>y</u> et
$\int$	ship	v	very



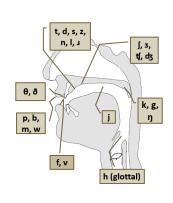
#### Consonant classification

- Consonants are classified according to their voicedness and according to where and how the air stream is obstructed. The relevant criteria, hence, are...
- ► State of glottis
  - voicedness or voicelessness (voicing)
- ► Place of articulation
  - bilabial, labio-dental, alveolar, glottal, etc.
- ► Manner of articulation
  - ▶ plosive, nasal, etc.



### Consonant classification

- Soft palate/velum (velar)  $k, g, \eta$
- ► Hart palate (palatal) j
- Palate/alveolar (post-alveolar) ∫, ʒ, t∫, dʒ
- ► Alveolar ridge (alveolar) t, d, n, s, z, l, x
- Teeth (dental)  $\theta$ ,  $\delta$
- ► Lips (labial) p, b, m, w (bilabial); f, v (labio-dental)



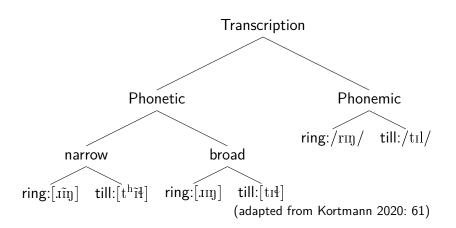


#### Consonant classification

- ▶ Plosives (also called stops, Verschlusslaut) p, b, t, d, k, g
- Fricatives ("with friction", Reibelaut)  $f, \delta, \theta, s, z, \int, 3$
- Affricates (plosives and homorganic fricatives, Affrikate)
   t∫, d₃
   (compare German: ts, pf, ?ps)
- ► Nasals ("through the nose", Nasale) m, n, ŋ
- ► Approximants ("getting close", Näherungslaut) w, ɪ, l, j



# Transcription





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Language and the Brain

History of English

Phonetic

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Morphology

Syntax

Semantics

Semantics

Pragmatics

Sociolinguistics and Language Change

Language Acquisition and Language Learning



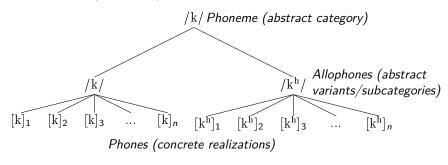
### Today's topics and terms

- ► Segmental and suprasegmental phonology
- ► Phoneme
- ► Minimal Pair
- ► Allophones
- ► Syllable
- ► Phonological processes
- ► Word stress and sentence stress



## Phonology: Allophony and Syllables

Functional level (Phonology)

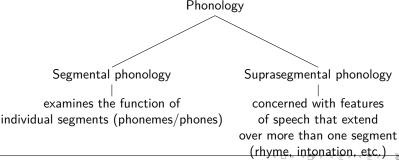


Descriptive level (Phonetics)



### Phonology

- Concerned with the speakers knowledge of the sound system of languages.
- Studies the so-called sound inventory, its function and (mental) organization.
- ► Study of sounds on the functional level.





Phonology is NOT (so much) concerned with the actual articulation of sounds! It is concerned with the function and interaction of phonemes!



# Segmental Phonology

- ► Concerned with the function of segments.
- ► Some segments distinguish meaning:
  - (9) /<u>lait</u>/ : /<u>bait</u>/
- ► If two sounds differ/are in contrast/are distinctive/are in opposition, the contrasting units are called *phonemes*.



#### **Phonemes**

- ► Phonemes are the smallest meaning-distinguishing units in language.
- ► Phonemes are not actual sounds (they are not themselves articulated) but abstract mental representations (ideal sounds) that underlie concrete articulation.
- ▶ Phonemes are identified by applying a *minimal pair test*.
- ► The so-called phoneme inventory of a given language encompasses all contrasting sounds that are identified by the minimal pair test.



# Minimal pair test

► Chose words that ...

► have the same number of segments :

► differ in only one sound (segment)

differ in meaning

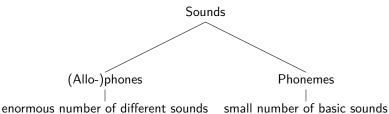
	Se	gme	ent	
Word	1	2	3	
sun	S	Λ	n	
fun	f	Λ	n	

ightharpoonup /s/ and /f/ are phonemes in English because they create a difference in meaning.



Every language uses a relatively small number of sounds which are combined in a relatively large number of different ways. [...] The enormous numbers of different sounds that can be found in any given language can be classified and grouped into a small number of basic sounds.

(Nathan 2008: 28)



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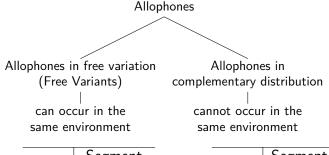


### Allophones

- ► Allo "other"<sub>Greek</sub> + phone "sound"<sub>Greek</sub>
- ► Subcategories of phonemes (basic "sounds").
- Allophonic variation occurs in all languages, but the patterning of phonemes and allophones is language specific.
  - Laymen regard allophones of one phoneme as the same sound.
  - ► Phonetically (slightly) different.



# **Allophones**



	S	egm	ent		Se	gme	ent	
Word	1	2	3	Word	1	2	3	
rip	J	I	р	til	t	I	ł	
rip	J	I	p	love	l 1	$\Lambda$	V	
rip	J	I	<u> </u>	lol	1	D	ł	



# Allophones in complementary distribution

- ► Allophones in complementary distribution are variants of the same phoneme that cannot occur in the same phonetic or phonological environment.
- ► Allophones in complementary distribution are like . . .



Cannot occur in the same environment!

Louis Lane is in danger Daily Planet office

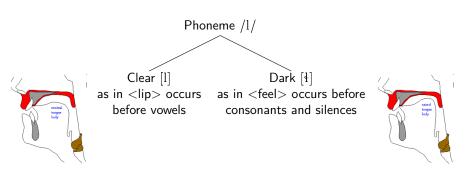


Dr. Martin Schweinberger 134



# Allophones in complementary distribution

► Clear l and dark ł are allophones in complementary distribution.



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#### Phonotactic Rules

- ► Rules that define the translation of knowledge about language into actual speech sounds.
- ► Such rules are not universal, but language specific.
- ▶ In English, the voiced alveolar lateral approximant becomes velarised when it occurs before a consonant or silence:
  - ▶ phonetic form [lʌł] and [bɪld]
  - ▶ phonemic form /lʌl/ and /bɪld/
- ► In German, all word final plosives become devoiced. Thus
  - in terms of voicing there is no difference between the pronunciation of  $\langle Rad \rangle$  and  $\langle Rat \rangle$ .



#### Distinctive Features

▶ Distinctive feature of minimal pairs [ziːł] and [siːł] or [bɪt] and [bɪd] is voicing (manner and place of articulation are identical). Sounds can be characterised by bundles of distinctive features marked by (-) or (+).

	Sound						
Feature	/b/	$/\mathrm{d}/$	/g/	/k/			
plosive	+	+	+	+			
voiced	+	+	+	-			
(bi-)labial	+	-	-	-			
alveolar	-	+	-	-			
velar	-	-	+	+			



# Suprasegmental Phonology

► Suprasegmental phonology deals with phonological properties that extend over more than a single segment.

Suprasegmental Phonology

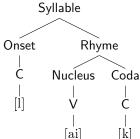
deals with the combination of segments into larger units (syllables)

studies properties of larger stretches of speech (prosody, intonation, stress, ...)



### Syllable

- ► Phonological units above phoneme level
- ► Smallest rhythmic unit of speech
- ► Monosyllabic words: words with only one syllable
- ► Polysyllabic words: words with at least two syllables.
- ► In English, all syllables contain a nucleus (or peak, core, center), a coda and an onset.





### Syllable

- ► Nucleus
  - central element of a syllable.
  - ▶ usually a vowel sound (V).
- ► Coda
  - ▶ up to 4 consonants that follow the vowel (CCCC).
- ▶ Onset
  - ▶ up to 3 consonants that precede the vowel (CCC).
- ► Rhyme
  - ► nucleus and coda form the *rhyme*
- Open Syllables are syllables in which the coda is empty.
- ► Closed Syllables are syllables in which one or more consonants follow the nucleus.



## Syllable

Languages differ with respect to the degree of complexity they allow in terms of syllable structure

- ➤ Simple syllable structure (C)V, e.g. Hawaiian.
- Moderately complex syllable structure (C)(C)V, (C)V(C), (C)(C)V(C), e.g. Darai (Indo-Aryan; Nepal: /bwak/ '(his) father'.
- Complex syllable structure (C)(C)(C)V(C)(C)(C), e.g. English /strengkθs/ 'strengths'.



### Phonological processes

- ➤ Sounds are changed to fit their surrounding/ environment and speakers adjust the sounds they produce according to rules of their language without realizing it.
- ► Such adaptations are known since the 19<sup>th</sup> century and called "divergences".
- ► Divergences are either . . .
  - physiophonetic: phonetically motivated
  - paleophonetic: conventionally or historically motivated



### Phonological processes

- ► Progressive Assimilation
  - ► The noun plural marker, the singular present tense (3rd person) marker, the possessive marker, and sibilants always agree in voicing with the proceeding sound.
  - Progressive assimilation moves forward to the following segment.

Word/phrase	Transcription
dogs	[dpg z]
cats	[kæt s]
faxes	[fæks ız]
he goes	[hɪgoʊ z]
he walks	$[a \ \mathrm{kxcwid}]$
Rick's	[rɪk s]
John's	[d3 pn z]



### Phonological processes

► Regressive Assimilation

► All nasals become [m] before /p/, /b/, and /m/.

Word/phrase	Transcription
ten bats	[tembæts]
don't be	$[\mathrm{daumpi}]$
Church Street	[tʃɜtʃtɹiːt]

- Regressive assimilation moves backwards to the preceding segment.
- ► Reciprocal Assimilation

Reciprocal Assimilation occurs if two neighbouring sounds are combined to form a new sound.

Word/phrase	Transcription
don't you	[dəʊntʃuː]
kiss you	[kı∫uː]



### Phonological processes

- Assimilation
  - Assimilating effect or influence on sounds by neighboring sounds.
  - Most frequent type of assimilation is regressive assimilation.
  - ► Tendency to produce homorganic sounds, assimilation with respect to place of articulation to increase ease of articulation
- ► Linguistic economy
  - ► The "principle of minimal effort" is mainly responsible for allophonic variation.



### Phonological processes

- ▶ Deletion
  - ▶ Deletion refers to cases in which sounds are omitted.
  - Syncope
    - ▶ deletion in the middle of a word.
  - ► Apocope
    - ▶ deletion at the end of a word.

Word/phrase	Full	Reduced
every	[evərɪ]	[evri]
family	$[{ m fæməli}]$	[fæmli]
lastly	[laxtli]	[la <b>x</b> slı]
left behind	$[{ m leftbihamd}]$	[lefbihaind]



### Phonological processes

#### ► Insertion

- ► Spanish does not permit /sk/ clusters at the beginning of words: school (sp.) <escuela> = [eskwelʌ]
- ▶ But sounds may also be inserted in the middle of a word or phrase: athlete =  $[æ\theta \text{olixt}]$
- ► Liaison refers to a linking r in non-rhotic dialects (if following word begins with a vowel):
  - <My car is gone $> = [maika:^r isgon]$
- Intrusion refers to an intrusive r between words, even if there is no <r> in the spelling: <law and order> = [lɔːrənɔːdə]

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### Stress

- ... contributes to understanding.
- ▶ ... force used to produce a syllable.
- ► ...indicated by cvc'cvc.
- ...in longer polysyllabic words, we can distinguish between primary stress cvc'cvc and secondary stress cvcv'cvcv.
- ...important feature in structure not only of words, but also of phrases and sentences.
  - (10) a. [im'pv't] (import; verb)
    - b. ['impo't] (import; noun)
  - (11) a. [en'tra:ns] (entrance; verb meaning delight, enchant)
    - b. ['entrəns] (entrance; noun meaning door, gate)



### Word stress

- ► English words with two syllables or more will have some syllable more prominent that others.
- ► Word stress can be meaning distinguishing.
  - (12) a.  $[\operatorname{im}'\operatorname{pp}'t]$  (import; verb)
    - b. ['impv't] (import; noun)
  - (13) a. ["umfarran] (to run over; verb)
    - b. [um'farrən] (to drive around; verb)
  - (14) a. ['august] (name of a male person; noun)
    - b. [av'gvst] (month; noun)



### Word stress

- ▶ Due to the massive influx of foreign vocabulary, word stress is generally not predictable (rule of thumb for word stress: always stress the last but one syllable)
- ▶ Word stress can cause vowel change and languages vary concerning whether their vowels are weakened when they appear in unstressed syllables (as in English, Russian) or not (as in Polish or to a lesser extent in German).



### Sentence stress

- ► Sentence stress depends to a larger part on rhythm.
- ► Rhythm refers to the distribution of stressed syllables in a phrase or sentence.
- ► Lexical items that carry main semantic content (nouns, adjectives, verbs, adverbs) take stress.
- ► Monosyllabic function words (grammatical PoS like prepositions, conjunctions personal pronouns) do no take stress and their vowels become schwas.

152



# Shift Stress (Switch stress)

- ► Shift stress refers to situations in which syllables with primary stress in citation form become unstressed.
- ➤ Shift stress affects words (Adj) with more than one stress in larger constructions, e.g. in NPs.
- Shift stress is typically English.
- ▶ It involves word and sentence stress.

- Adjectives ending in -ese indicating nationalities: Chinese, Japanese, Burmese, Portuguese ...
   e. g. The guide is Chinese / t ariniz/
- A Chinese guide /'tʃaɪ niz 'gaɪd/
  2. Numbers above twelve: thirteen, fifteen, twenty-two, fifty-six ...
  e. g. Jane's thirteen / θa: 'ti:n/
  John's twenty-two / twen ti 'tu:/

Thirteen books /'03: ti:n 'buks/ with twenty-two pages /'twen ti tu: 'pei dʒiz/ in colour Ha died in 1212 /'02: ti:n fer 'birs/

He died in 1313 / 03: ti:n 03: 'ti:n/
3. Many adjectives starting with un-: unhappy, unarmed, unclear ...

- e. g. She felt unhappy /ˌʌn ˈhæp i/ An unhappy feeling /ˈʌn hæp i ˈfi: ln/
- Many compound adjectives of the kind ADJ+NOUN+ed: redhaired, blue-eyed, two-faced ...
   e. q. They're all red-haired / red 'head/

A red-haired youth appeared /'red head 'ju:0/

- 5. Some common adverbs which can also be used adjectivally: outside, inside, next-door, upstairs, downstairs ...
  e. a. They live next-door / nekst 'do:/
  - Our next-door neighbour /'nekst do: 'nei bə/
- Names of some cities and other geographical landmarks which can also be used adjectivally: Berlin, Budapest, Hyde Park, Notting Hill ...

e. g. They went to Berlin yesterday /,bs: 'lm/ The Berlin Police have arrested him /'bs: lm pə 'li:s/ Hyde Park /,haɪd 'pɑ:k/ Hyde Park Corner /'haɪd pɑ:k' ko: nə/



# Contrastive Stress (Emphatic Stress)

- ► Usually the last stressed word is most important to the speaker.
- ► If two elements within a sentence are contrasted, these elements are stressed
  - (15) I didn't want a <u>small</u> piece of cake, I wanted a large piece.
- Sometimes marked by making the stress extra loud.
- Usually marked with a falling pitch, i.e. by starting the contrastive stress with higher pitch that is followed by syllables with considerably lower pitch.



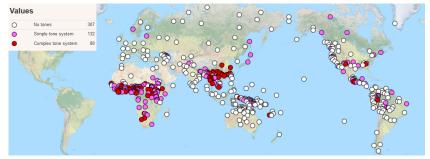
### Pitch

- ► The faster the vocal cords vibrate, the higher the pitch.
- ► All voiced sounds can be produced with different pitches.
- ► Pitch is usually described in terms of high and low rises and falls in pitch across a stretch of speech
- ► In English, intonation helps marking syntactic units and vaguely corresponds to punctuation.



### Pitch

► In many languages (not English) the meaning of words can differ according to pitch (such languages are called "tone languages").



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## Tone Languages

Mandarin is a tone or tonal language while German is not. however, it is possible to find similar discourse strategies in German too (Imagine two German speakers having the short conversation on a field).

Mandarin		Deutsch	
ma	Mutter	Da.	descriptive
ma	Pferd	Da?	interrogative
ma	Mist! (Expletive)	Da!	imperative
ma	Elefantengras	Da?!	accepting



### Table of Contents

Overview

Semiotics

Language and the Brain

History of English

T HOHELICS

Phonology

### Morphology

Syntax

Semantics

Semantics

Pragmatics

Sociolinguistics and Language Change

Language Acquisition and Language Learning



### Today's topics and terms

- ► Morphemes
- ► Types of morphemes
- ► Tokens and types
- ► Types of affixes
- Allomorphy
- ▶ Word Formation
- ► Derivation and inflection



- ► An investigation into what elements an utterance consists of is called an morphological analysis.
- ► In fact, morphology means "study of forms" and was adopted from biology.
- ► In the middle of the 19<sup>th</sup> century the term was employed to describe the study of basic meaningful elements.
- ► However, we do not need to look at e.g. Swahili to discover that words are made up of a number of "meaning bearing elements" . . .
  - ... but anyways, let's do that ...

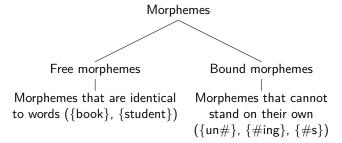


Nitakupenda. means I will love you.

- ► How many "words" does "I will love you!" contain and how many words does "nitakupenda" contain?
- ► English "words" and Swahili "words" are not the same but maybe both contain similar "meaning elements".
- ► Maybe it is better to look at these meaning elements than at words . . .
- ▶ But what are these elements?



- ► Smallest meaning-bearing units of language.
- ► Word contains at least one morpheme





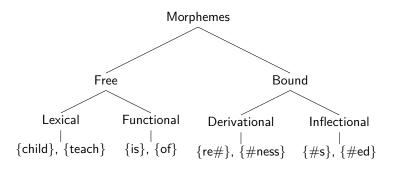
talks talker talking talked

- ► All words above have one element in common (talk), but in all of the words some element is added ({# s}, {# er}, {# ing}, {# ed}).
- ► Let's look at another example . . .
- (16) How many morphemes is *<tourists>* made up of?

```
morpheme \{ \text{ tour } \} \{ \# \text{ ist } \} \{ \# \text{ s } \} type free bound bound meaning sth. to do with "tour" person doing sth. plural
```

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## Types and tokens

- (17) The students borrowed the books from the library.
- ► Word Types
  - ► The sentence above consists of 6 words, since "the" appears 3 times and is, thus, counted only once.
- ► Type frequency
  - ► Frequency of words with regard of repetition. If words appear repeatedly, they are only counted once.
- ▶ Word tokens
  - ► The sentence above consists of 8 word tokens.

#### Token frequency

► Word occurrence without regard of repetition. If words appear repeatedly, they counted as many times as they



### Open and closed classes

We cannot create words however we like. Some word classes accept new members while other word classes do not.

Open-Closed class distinction		
Open Class Words	Closed Class Words	
(adopt new members)	(do not adopt new members)	
Content Words	Function Words	
(lexical; nouns, adjectives,	(grammatical; articles,	
verbs, and adverbs)	prepositions, quantifiers, etc.)	
Content-Function distinction		

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### Affixes across the world

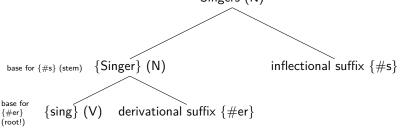
Language	Stem	Derivational	Inflectional	Full Word
		Affix	Affix	
English	{dark}	{#en#}	{#ed}	darkened
		('make')	('past')	
Aztec	$\{mic\}$	$\{\#tia\#\}$	$\{\#s\}$	mictias
(Mexico)	('die')	('cause to')	('future')	('will kill')

Kanuri (Nigeria)	Adjective	Noun
('excellen(t)/-ce')	karite	nemkarite
('big/-ness')	kura	nemkura
('small/-ness')	gana	?
('bad/-ness')	?	nemdibi



- ▶ Base: any form to which an affix is attached
- ► Stem: a form without inflectional affixes (but with derivational affixes)
- ► Root: a form without any inflectional or derivational affixes (cannot be analyzed any further morphologically)

  Singers (N)





### **Affixes**

Besides prefixes and suffixes, there are two/three more types of affixes.

- ► Infixation
  - ► Infixes are inserted into the base (abso-bloomoing-lutely)
- Circumfixes
  - Circumfixes are attached to beginning and end of the base (ge-sag-t or down-load-ed)
- Zero-morphs
  - ► Some linguists argue that the plural morpheme in "information" or "sheep" exists but it is not realized.



## Allomorphy (Morphological Alternation)

Problem: One morpheme may be realized differently under different conditions.

► Indefinite and definite article

```
(18) /\theta/ question : /\theta n/ answer /\theta/ book : /\theta n/ author /\theta/ fence : /\theta n/ idea In isolation /ei/
```

- (19)  $/\eth_{\theta}/$  question :  $/\eth_{I}/$  answer  $/\eth_{\theta}/$  book :  $/\eth_{I}/$  author  $/\eth_{\theta}/$  fence :  $/\eth_{I}/$  idea In isolation  $/\eth_{I}/$
- ► Different variants = allomorphs



### Allomorphy (Morphological Alternation)

Types of Allomorphy

► Phonological Allomorphy

(20) 
$$\{\#ed\} = /d/, /t/, /it/$$

Weak suppletion (weak suppletive allomorphy)

(21) 
$$/aI/$$
 (buy) :  $/oI/$  (bought)

- Phonological similarity but no phonological rule/condition.
- Strong suppletion (strong suppletive allomorphy)
  - (22) go: went / be: is: are: was: were
  - No phonological similarity and no phonological rule/condition



## Allomorphy (Morphological Alternation)

Determinants of Allomorphy (Morphological Alternation)

► Phonological Conditioning

```
(23) /hɔːzɪz/:/kæts/:/dagz/
```

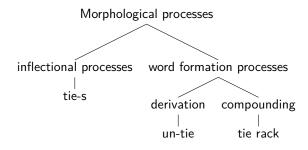
- Choice of allomorph is determined by phonological environment
- ► Morphological Conditioning

```
(24) Gen. wife's /waifs/: Pl. wives /waivz/
```

- ► Morphological context determines choice of allomorph
- ► Lexical Conditioning

```
(25) /bai/:/bait/vs/krai/:/kraid/(not/krait/)
```







## Inflectional morphology

- ► Of all inflectional morphemes that were present in Old English, only 8 inflectional suffixes have survived.
- ► The main task of inflectional morphemes is agreement.

nouns	declension	{PLURAL}:{#s}	two boys
		$\{GENITIV\}: \{\#s\}$	the boy' <u>s</u>
verbs	conjugation	{3SG. IND. PRES}:{#s}	he works
		${PAST}:{\#ed}$	he work <u>ed</u>
		$\{PRES.\ PART\}{:}\{\#ing\}$	he is work <u>ing</u>
		$\{PAST.\ PART\}{:}\{\#ed\}$	he has work <u>ed</u>
adjective	comparison	$\{COMPARATIVE\}: \{\#er\}$	strong <u>er</u>
		$\{SUPERLATIVE\}{:}\{\#est\}$	strong <u>est</u>



#### WORD FORMATION



#### Derivation

#### Most Productive Word Formation Process

- ▶ Derivational Prefixes
  - ... modify the meaning of words without any changes regarding the lexical class.
  - ► ... are often Latin or Greek origin ({pre#}, {meta#}, {pro#}, ...).
- Derivational Suffixes
  - ▶ ... may change the lexical class of words
  - (26)  $\{\# \text{ er}\} + \{\text{read}\}_V = \text{reader}_N$
  - ▶ ... may produce new words with different meanings.
  - (27)  $\{interview\} + \{\# er\} : \{interview\} + \{\# ee\}$
  - (28)  $\{un\#\} + \{kind\} = \{unkind\}$



# Conversion (Zero Derivation)

- ► A word comes to belong to another word class without addition of an affix.
- ► Many English words exist as nouns and verbs
  - (29)  $\operatorname{smell}_{V} (+ \{\emptyset\}) : \operatorname{smell}_{N}$
  - (30)  $taste_V (+ \{\emptyset\}) : taste_N$
  - (31)  $\operatorname{talk}_{V} (+ \{\emptyset\}) : \operatorname{talk}_{N}$



## Compounding

- Combining at least two existing words to form a new word.
- Most compounds in English are nouns, verbs and adjectives (exceptions: "into", "onto", ...).
- ► Usually the head of a compound (right-hand element) determines its lexical class.
- ► English compounds may be written as one word, with or without hyphen, or as two words.



### Compounding

### Compounding

Endocentirc compounds Exocentric compounds

- ► Endocentric Compounds
  - ► Meaning can be guessed from its components.
  - ► Head is specified by the left-hand-side element.
- (32) <morphology book> is a special kind of <book>.
  - ► Exocentric Compounds
    - Meaning cannot be guessed from its components.
- (33) < redneck> is a US social group, not a "red" neck.
- (34) <pickpocket> is not a special kind of <pocket>, but a thief.



### Conjunction Test

- ► To distinguish compounds from non-compound combinations of adjectives and nouns we can use the so-called "conjunction test".
  - ► Insertion of another adjective into the phrase.
  - ► The insertion is not possible in case the phrase is a compound.
- Another method to distinguish compounds from non-compounds is to look at stress
- ► In compounds, stress is usually on the first element ('redneck)
- ► In non-compounds, stress is usually on the second element (red'neck)



### Blending

▶ Blends combine non-morphemic parts of words.

$$(35) \quad \{\mathsf{breakfast}\} + \{\mathsf{lunch}\} \rightarrow \{\mathsf{brunch}\}$$

### Clipping

Creation of new words by shortening existing ones.

(36) 
$$\{professor\} \rightarrow \{prof\}$$

#### **Back-Formation**

- ▶ Real or supposed affix is removed to create a new word.
- (37) editor  $\rightarrow$  to edit; baby sitter  $\rightarrow$  to baby sit



## Coinage

- ► Invention of new words (word manufacture)
- (38) brand-names (Weetabix)
- (39) fictional characters (Hobbit)

#### Initialisms

► formed from the initial letters of a set of other words.



Alphabetisms pronunced as individual letters CD, VCR, DVD, BBC, ...

Acronyms pronunced like words AIDS, NATO, . . .



#### DERIVATION AND INFLECTION



## Derivation and inflection

Def.: derivational morphology changes one word (or lexeme) into another, while inflectional morphology creates different forms of the same lexeme.

- Derivation
   "Like many languages, English has far more derivational
   affixes than inflectional affixes" (Burling 1992: 44).
- Inflection
   Individual inflectional affixes are more common than derivational affixes (Burling 1992: 44)
- Determine word class based on suffixes (-ed, -s, -ment, -dom, -er)



### Derivation

- Change in word class (PoS) Exceptions (-dom: N  $\rightarrow$  N, -ish: adj  $\rightarrow$  adj)
- Irregular
   ism cannot be attached to all N
   Example: dinnerism
- More open
   Open to new members (uber-)
- Closer to root run-(n)er-s)
   Exception: mother(-s)-in-law vs. mother-in-law-s



### Inflection

- Inflection creates new word forms but not new words
- Regular
   Exception: derivational suffix -er can be attached to almost all verbs; comparative inflectional suffixes -er and -est cannot be attached to all adjectives
- More closed limited access to new members: no new plural suffixes since old English
- Further away from root run-(n)er-s; exception: mother(-s)-in-law vs. mother-in-law-s



### Inflection

- "English is generally credited with exactly eight inflectional suffixes" (Burling 1992: 44)
  - the plural-s and the possessive -'s are used with nouns
  - er and est with adjectives
  - and third person singular -s, progressive/pres. part. -ing, past -ed, and the perfect suffix/past part. -en (as in bitten, ridden, forbidden) with verbs.
- In English, all inflectional affixes are suffixes, but the grammatical information can be communicated by other means, e.g. internal change (Ablaut)



# Derivation and inflection (Kroeger 2005: 253)

	Derivational	Inflectional	
category-changing	often	generally not	
paradigmatic	no	yes	
productivity	limited and variable (lexically specific)	highly productive	
type of meaning	often lexical often	purely grammatical	
semantic regularity	often unpredictable (conventionalized)	regular	
restricted to specific syntactic environments	no	yes	
position	central	peripheral	
-	(near root)	(near edges of word)	
portmanteau forms	rarely	often	
repeatable?	sometimes	never	



### Table of Contents

Overview

Semiotics

Language and the Brain

History of English

1 Honetics

Phonology

Morphology

### Syntax

Semantics

Semantics

Pragmatics

Sociolinguistics and Language Change

Language Acquisition and Language Learning

Syntax



## Today's topics and terms

- ► Languages in comparison
- ► Parts of speech
- ► Constituency
- ▶ Phrases
- ► Phrase structure rules
- ► Tree diagrams



## Syntax

Syntax is the study of phrase and sentence structure

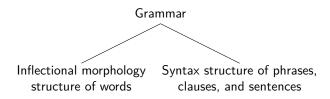
- ► How do we combine words?
  - (40) I like apples and bananas.
  - (41) ?Apples I like and bananas.
  - (42) \*Like bananas apples I and.



#### LANGUAGES IN COMPARISON



# Grammar and Syntax





Sequencing is not unlimited, i.e. the number of grammatically accepted combinations is limited.

- ► Some languages achieve via inflection (Latin) what other languages achieve syntactically (English).
- (43) The boy sees the girl.  $\neq$  The girl sees the boy.
- (44) Puer videt puellam. = Puellam puer videt. = Puer puellam videt. = Videt puer puellam.
- ▶ In English the grammatical information (subject vs. object) is encoded in the word order, while the same information is encoded in case marking in Latin (nominative = subject; accusative = direct object).
- ► Languages are categorized according to how they encode grammatical information.



### Agglutinating languages

► ... each grammatical morph carries exactly one piece of information.

Inflectional languages (also called synthetic or fusional)

- ...one grammatical morph usually carries more than one meaning (portmanteu morphemes).
- ► For example, the Latin inflectional suffix {#us} carries the meaning(s) SG, MASC and NOM.
- ... suppletion is more common in such languages.

Languages are categorized according to how they encode grammatical information.



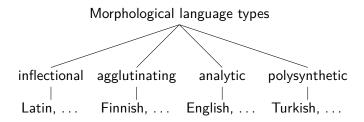
### Analytic languages

... each morpheme represents a word/stem (little or no inflectional morphemes).

### Polysythetic languages

- ...long strings of affixes or incorporated roots in a single word.
- ... what is expressed by sentences in English is expressed by a single word in such languages.

Languages are categorized according to how they encode grammatical information.



#### European languages

- ► ... have undergone a change from synthetic to analytic (this might actually be a circular process).
- ... show a decrease in the number of inflectional morphemes.
- English has lost almost all inflectional morphemes (English has been referred to as the "language of largely invariable words").



#### APPROACHES TO GRAMMAR



## Approaches to grammar

- ► Study of the structure (the skeleton) of phrases and sentences of a given language.
- ► Descriptive approach
  - ...studying language as it is actually spoken.
  - ... without criticism of colloquial features.
- ► Prescriptive approach (normative approach)
  - ...describes how a language should be spoken.
  - ...common among grammarians of the 18th and 19th century to lay down arbitrary rules for the correct or educated use of English.
  - ► No "split infinitive" (to quickly go); "I will" instead of "I shall" to indicate future tense.



#### PARTS OF SPEECH



- ► The grammatical vocabulary to describe "words" dates back to early descriptions of Latin and Greek (also to a minor extent Sanskrit).
- ► Those grammatical descriptions were quite elaborate and thus existing terms were adopted to apply in modern grammatical descriptions of late languages.
- (45) The lucky boys found a backpack
  Determiner Adjective Noun Verb Determiner Noun
  in the park and they opened
  Preposition Determiner Noun Conjunction Pronoun Verb
  it carefully.
  Pronoun Adverb



Example(s)
boy, dogs, school, roughness, love
a, an, the, one, three, some, all
happy, large, strange
will, should, would
teach, talk, go
slowly, beautifully, here, very
at, in, on, under, near, with, without
and, or, because, when
I, you, he/she/it, herself, they



#### **Determinatives**

- ➤ The label for the class is determinatives, but the members of that class are referred to a s determiners (Huddleston and Pullum 2005: 368–399).
- ▶ Determiners can be subdivided into...
  - ► articles (a, an, the)
  - demonstratives (this, that, these, those)
  - ▶ indefinite pronouns (or quantifiers) (all, every, some, most, many)
  - cardinal numbers (e.g. one, two, three)



- ▶ Determine the parts of speech in the following passage.
- (46) Jabberwocky Lewis Carroll (from *Through the Looking-Glass*, 1872)

Twas brillig, and the slithy toves
Did gyre and gimble in the wabe:
All mimsy were the borogoves,
And the mome raths outgrabe.

Beware the <u>Jabberwock</u>, my son! The jaws that bite, the claws that catch! Beware the <u>Jubjub</u> bird, and shun The frumious Bandersnatch!

He took his <u>vorpal</u> sword in hand: Long time the <u>manxome</u> foe he sought – So rested he by the <u>Tumtum</u> tree, And stood awhile in thought.



# Criteria to classify parts of speech

- ▶ Meaning Refers to the traditional semantic notion of the word classes. E.g.: all words which name persons, objects, and places are nouns.
- ► Inflection
  Refers to the morphological properties of a word. E.g.: if a word ends with {# ed} is probably a verb.
- ▶ Derivation E.g.: if a word ends with {# ment}, it is most likely a noun, if a words ends with {# ly}, it is most likely an adverb.etc.



# Criteria to classify parts of speech

▶ Distribution Based on the syntactic properties of a word, such as its potential positions or functions within a phrase, clause or sentence, its word class can be determined. E.g.: if a word occurs between a determiner and a noun, it is most likely

► Orthography

If a word is capitalized but not at the beginning of a sentence, it is most-likely a noun.

an adjective.



The classification of words (lexemes) into different syntactic categories can be problematic, because

- ► ... some word classes are more heterogeneous than others. Due to their various modifying functions, adverbs have often been the "waste bin" for lexemes that could not be clearly assigned to other parts of speech.
- ... transitions and fuzzy boundaries between different categories.
- ... one word form can belong to more than one word class multiple classifications are possible.
- ▶ ... parts of speech are heterogeneous in themselves not all members of a certain word class exhibit all its characteristics.



#### Constituency



# Syntax and constituency

Greek: syntaxis = order, arrangement.

- Syntax is the study of the rules that enable us to recognize and generate an unlimited number phrases, clauses and sentences from smaller building blocks.
- ► These smaller building blocks are formed of so-called "constituents".



## Syntax and constituency

```
Sentence(s) contain several

Clause(s) contain several

Phrase(s) contain several

Word(s) contain several

Morpheme(s) contain several

Phoneme(s)
```



## Constituency

The young linguist will sell her book to a colleague very soon.

- ► Some parts of speech belong together more closely than others.
- ► For example, the words <The young linguist> are more closely related than the words in the sequence <books to a>. Groups of words that belong together are called phrases.
- ► In most phrases one central element (head) is extended by adding one or several modifying elements (modifiers).



### Constituents

Everything which is governed by a node is a constituent of the node.

- ► To determine constituency, we use constituency tests.
  - Substitution with a pro-form
  - Questioning
  - Coordination
  - Deletion
  - Movement (Topicalization/Fronting)
  - Clefting (Pseudo-)Clefting



## Constituency tests

#### Substitution with a pro-form

- The girls were angry. : They were angry.
  - $\rightarrow$  [The girls] is a constituent

### Questioning (Topicalization/Fronting)

- The girls were angry. : Who were angry?
  - $\rightarrow$  [The girls] is a constituent.

#### Coordination

- The girls were angry. : The girls and the boys were angry.
  - $\rightarrow$  [The girls] is a constituent.

#### Deletion

- The girls were very angry all day. : The girls were angry.
  - $\rightarrow$  [all day] is a constituent.



## Constituency tests

#### Movement

- The girls were very angry all day. : All day the girls were angry.
  - $\rightarrow$  [all day] is a constituent.

### Clefting

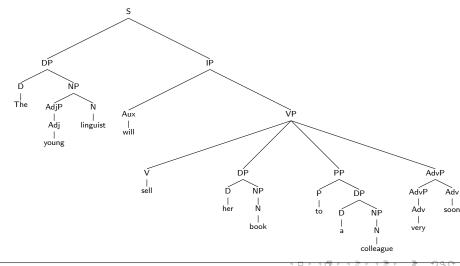
- She bought a pair of gloves with silk embroidery.
  - : It was a pair of gloves with silk embroidery that she bought.
  - $\rightarrow$  [a pair of gloves with silk embroidery] is a constituent.

#### Pseudoclefting

- She bought a pair of gloves with silk embroidery.
  - : A pair of gloves with silk embroidery is what she bought.
  - $\rightarrow$  [a pair of gloves with silk embroidery] is a constituent.



### The young linguist will sell her book to a colleague very soon.





### The young linguist will sell her book to a colleague very soon.

- ► Using all of the constituency tests for each phrase, determine...
  - the constituents of the sentence above:
  - which of the tests are applicable to which phrases.

	The linguist	young	sell	
Substitution Questioning Movement	√ √ -			



### Phrases



The noun phrase (NP)

► NPs are centered around a noun or a pronoun and can take relative clauses as complements



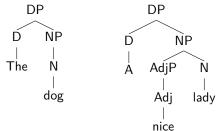
► Often, NPs are part of DPs





The determiner phrase (DP)

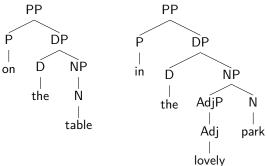
▶ DPs are centered around a determiner





The prepositional phrase (PP)

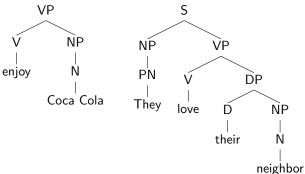
► PPs contain a preposition as their head and an NP as post-modifier





The verb phrase (VP)

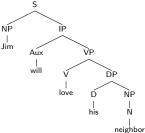
► VPs contain a verb as their head





The inflection phrase (IP)

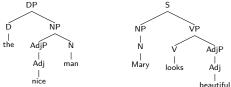
AuxPs contain an auxiliary as their head and a VP as complement





The adjective phrase (AdjP)

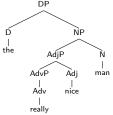
► AdjPs contain an adjective as their head

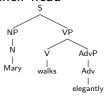




### The adverb phrase (AdvP)

► AdvPs contain an adverb as their head







### PHRASE STRUCTURE RULES



## Phrase Structure Rules

Sequencing is not unlimited, i.e. the number of grammatically accepted combinations is limited.

- ► For example, the sequence \*<lucky boys the> would not be rated as grammatically correct by native speakers of English.
- ▶ In English, the article <the> must stand before the adjective <lucky> which must stand before the noun <boys> (article + adjective + noun).
- ► Such rules are called *Phrase Structure Rules* (PSRs)
- ► In general, PSRs in English are more strict than PSRs in German!
- ► Different languages have different PSRs!

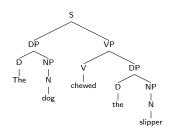


Imagine you come across a language (which only consists of 3 sentences) and want to describe its grammar.

- (47) The dog chewed the slipper.
- (48) The woman ate the cake.
- (49) A fish swam a mile.

The PSRs that can be inferred are:

- 1.  $S \rightarrow DP VP$
- 2.  $VP \rightarrow VDP$
- 3.  $DP \rightarrow D NP$
- 4.  $NP \rightarrow N$



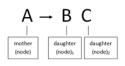


Not any structure goes!

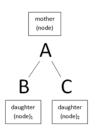
Phrases "allow" certain patterns but not others, e.g.:

- (50) $\mathsf{DP} \to \mathsf{D} \; \mathsf{NP}$ but not
- (51) \*DP  $\rightarrow$  NP D

PS rules have the following form:



that is

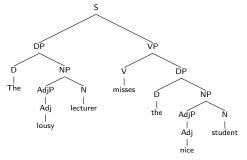


- ▶ In a tree structure diagram, all nodes must be "licensed" or generated by a PS rule, i.e. elements can only form a node if the structure of the elements is in accordance with a given PS rule.
- ► In PS rules optional elements occur in rounded brackets, complementary elements occur in curly brackets (cf. i and ii).

► Mother nodes are said to "govern" all their daughter nodes.



▶ In cases where the tree diagram depicts the hierarchical structure of a clause or sentence, the top most mother node is labeled S and referred to as the "root" indicating that the entire structure is a sentence or a clause (S).



Dr. Martin Schweinberger

Let's take the simple declarative sentences below and imagine that these were the only sentences of a mysterious language similar to English. Which PSRs can you infer from these example sentences?

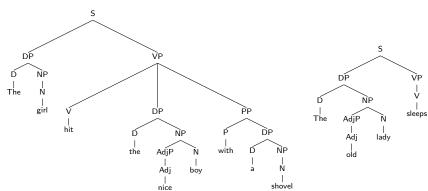
- (52) The girl hit the nice boy with a shovel.
- (53) The old lady sleeps.



- (54) The girl hit the nice boy with a shovel.
- (55) The old lady sleeps.
- 1. DP  $\rightarrow$  D NP: [The<sub>D</sub> [girl]<sub>NP</sub>]<sub>DP</sub>, [the<sub>D</sub> [nice boy]<sub>NP</sub>]<sub>DP</sub>, [The<sub>D</sub> [old lady]<sub>NP</sub>]<sub>DP</sub>
- 2.  $NP \rightarrow (AdjP) \ N: [girl_N]_{NP}, [[nice]_{AdjP} \ boy_N]_{NP}, [[old]_{AdjP} \ lady_N]_{NP}$
- 3.  $AdjP \rightarrow Adj$ :  $[nice_{Adj}]_{AdjP}$ ,  $[nice_{old}]_{AdjP}$
- 4. PP  $\rightarrow$  P DP: [with<sub>P</sub> [a shovel]<sub>DP</sub>]<sub>PP</sub>
- 5. VP  $\rightarrow$  V (NP) (PP): [hit $_V$  [the boy] $_{DP}$  [with a shovel] $_{PP}$ ] $_{VP}$ , [sleeps $_V$ ] $_{VP}$
- 6. S  $\rightarrow$  DP VP: [[The girl]<sub>DP</sub> [hit the boy with a shovel]<sub>VP</sub>]<sub>S</sub>, [[The old lady]<sub>DP</sub> [sleeps]<sub>VP</sub>]<sub>S</sub>



- (56) The girl hit the nice boy with a shovel.
- (57) The old lady sleeps.





#### Exercise

► Have a look at examples provided for different types of phrases above and determine their PSRs.



### DRAWING TREE DIAGRAMS OF SYNTACTIC STRUCTURES



### How to draw tree diagrams

- ► Step 1: identify the parts of speech for all the words in the sentence.
- ► Step 2: try to figure out what words "go together in phrases" (i.e. figure out what the constituents are).
- ► Step 3: apply the rules backwards (bottom up) to build the tree.
  - ► Start with AdvP and AdjPs
  - Next do NPs, then DPs, then PPs, then VPs, and finally IPs
  - Generally, start at the right edge of the tree and work leftwards apply the S rule last.
- ► Step 4: now check your tree against your rules. Start at the top, and check that each set of lines can be generated by the rules.



### **Important**

- ► Nothing can be left dangling in space.
- ► Everything has to be attached to something higher up.
- ► Lines can't cross one another.



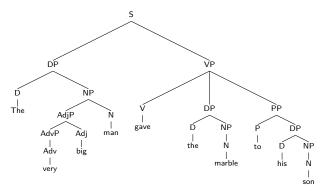
#### Exercise

- 1. Draw a tree diagram for the following sentence.
- (58) The very big man gave the marble to his son.

Syntax



### (59) The very big man gave the marble to his son.

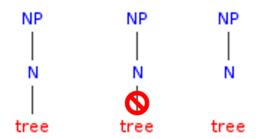


Dr. Martin Schweinberger 239



#### A clarification...

A line signals the application of a PS rule, so there is no line between a word and its category!





## Today's topics and terms

- ► Valency
- ► Form and function
- ► Theme vs rheme
- ► Semantic roles and argument structure
- ► Sentence types and sentence patterns
- ► Verbs
- ► Grammatical theories



### VALENCY



# Valency

- ► The valence of a verb tells us only the number of terms, or direct arguments; it says nothing about the presence or absence of oblique arguments.
- ▶ It is important to notice that the valence of the verb (in this sense) is not the same as the number of arguments it takes.
- ► For example, the verb *donate* takes three semantic arguments. However, *donate* has a valence of two because it takes only two term arguments, SUBJ and OBJ.

Svntax



## Sub-categorization

- ► The sub-categorization of a verb tells us all the Grammatical Relations which the verb assigns to its arguments, whether direct or oblique.
- ► For example, the verbs *hit* and *put* have the same valence (two), but different sub-categorization sets, since *put* requires an oblique argument while *hit* does not



## Valence alternation

- ► The verb *give* occurs in two different clause patterns.
  - (60) John gave Mary his old radio.
  - (61) John gave his old radio to Mary.
- ► We can now see that these two uses of the verb involve the same semantic roles but a different assignment of Grammatical Relations, i.e. different sub—categorization.



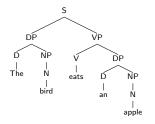
### FORM AND FUNCTION

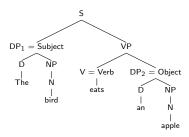


## Form and function

- ► So far: formal approach towards the analysis of words, phrases and clauses.
- ► Difference between FORM and FUNCTION
- ▶ DP, PP, VP, etc. (also PoS tags) refer to the form of constituents.
- Subject, verb, and object refer to the function of constituents.

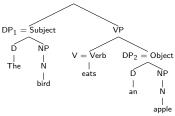








- ► Subjects are daughters of S and sisters of the VP.
- Objects are NPs and daughters of the VP and sisters of V.



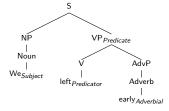


## Adverbs and adverbials

 $Adverb \neq Adverbial$ 

► Adverb: PoS (form)

► Adverbial: functional constituent (function)



Syntax

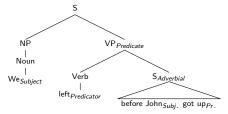


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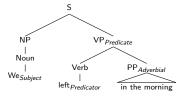


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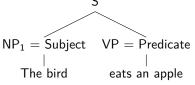
### Theme and rheme

Svntax



### Theme and Rheme

► Sentences can be divided into the Subject (typically a NP) and the Predicate (typically a VP).



- ► Subjects typically represent given/known information.
- ► Predicates typically represent new/unknown information.

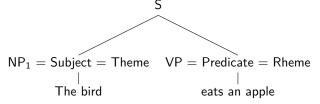


#### ► Theme

► The theme refers to what is known or given (old information ~ subject).

#### ► Rheme

▶ The rheme typically represents new information (the motivation for the sentence  $\sim$  predicate: everything that is daughter to the VP).





### SEMANTIC ROLES

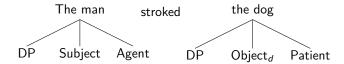
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### Semantic roles

Constituents (noun phrase, verb phrase, etc.) have

- syntactic relations (subject, predicate, object, etc.)
- ▶ semantic roles (agent, patient, etc.).
- (62) The man stroked the dog.





Role	Definition	Example
Agent	the initiator of an action	Pat ate a waffle.
PATIENT	the participant undergoing an action or change of state	Pat ate <b>a waffle</b> .
Тнеме	the participant that is moving	Pat threw a <b>rope</b> over a fence.
EXPERIENCER	the participant who is aware of a stimulus	Pat heard a sound.
STIMULUS	the participant that is experienced	Pat heard <b>a sound</b> .
BENEFICIARY	the participant who profits from an action	Pat sang for <b>me</b> .
RECIPIENT	the participant receiving an item	Pat gave <b>me</b> a waffle.



#### ARGUMENT STRUCTURE



## Argument structure

#### Argument structure

- ► Predicators differ from each other:
  - different predicators may require different numbers of arguments
  - predicators which require the same number of arguments may assign different semantic roles to those arguments.
- ► Argument structure for *sing*, *slap*, *love*, and *give*:

```
sing <agent>
slap <agent, patient>
love <experiencer, stimulus>
give <agent, theme, recipient>
```



#### Grammatical relations and semantic roles

	SUBJ(  John sings.	Grammatical Relations)
	AGENT	Semantic Roles)
	SUBJ OBJ(  Mary slapped John.	Grammatical Relations)
	AGENT PATIENT(	Semantic Roles)
c	SUBJ OBJ(  John loves Mary.	Grammatical Relations)
	EXPERIENCER STIMULUS	Semantic Roles)
	SUBJ OBJ OBL (  John gave the roses to his wife.	,
	AGENT THEME RECIPIENT (	Semantic Roles)

### SENTENCE TYPES

Syntax



## Sentence types

- ► The sentence is the largest independent syntactic unit of a language which is not embedded in any larger syntactic construction.
- Sentences that consist out of one subject-predicate structure are called *simple sentences*.
- ► Sentences with more than one clause are either called . . .
  - compound sentences (combination of main clauses).
  - complex sentences (combination of one main clause and at least one subordinate clause).

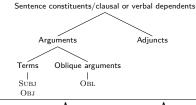


## Sentence types

- ▶ Declarative sentences (to inform someone of sth.)
  - (63) Anna is singing.
- ► Interrogative sentences (to get information about sth.)
  - (64) Is Anna singing?
- ► Imperative sentences (to get someone do sth.)
  - (65) Sing!
- Exclamatory sentences (to express our attitude towards about sth.)
  - (66) How beautiful Anna is singing!



## Sentence Constituents



	ARGUMENT	Adjunct
Obligatory	maybe	never
"Subclassify" verb	yes	no
Subj/Obj	maybe	never
Unique within clause	yes	no



## Sentence patterns

Sentences consists minimally of a subject and a predicate (other elements are objects and obliques (adjuncts are merely additions)).

Pattern	Subject	Predicate/verb	indirect Object	direct Object	Oblique
SV	Mary	was sleeping			
SVO	Mike	was dressing		the baby	
SVObl	John	sat			in his chair
SVOO	Jim	gave	Mary	a cookie	
SVOObl	She	lived		all her life	in the village

### Verbs



## Verb types

Verbs can be divided into ...

- ► lexical verbs (main verbs)
- ► grammatical verbs (auxiliaries)

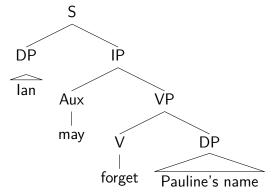
Historically, the division between theses two kinds of verbs has become more and more strict, so that, nowadays, English auxiliaries form a separate group which, morphologically as well as syntactically, is very different from main verbs.

- ► Auxiliaries can be divided into . . .
  - ▶ primary verbs (be, have and do)
  - ▶ modal verbs (e.g. will, would, shall, should, can, could, may, might, dare to, need to, or used to)
- ► The difference between primary verbs and modal verbs is that only primary verbs may also be used as main verbs.



#### Modals are distinct from ordinary verbs!

 Modals (and auxiliaries) form a closed functional category (the inflection category I).





- Modals (and auxiliaries) differ from verbs in that they only have finite forms (no infinitives, present or past participles).
- (67) a. \*It would be nice to can swim.
  - b. It would be nice to be able to swim
  - c. \*I am canning swim.
  - d. \*I have could swim.
  - e. He may swim.
  - f. \*He may swam.



## Verb types

- ► The main verb (head of VP) is central to the sentence structure
- ► Seven sentence patterns can be derived from different verb types.

Agruments	Verb type	Valency	Examples	Pattern
0	intransitive	avalent	rain, snow, freeze	SV
1	intransitive	monovalent	sleep, sit, walk	SV
2	preposition/intensive (copula)	divalent	be, become	SVC
2	preposition/intensive	divalent	live, stay, last	SVA
2	transitive	divalent	read, take, build	SVO
3	ditransitive	trivalent	give, offer, pass	SVOO
3	complex transitive	trivalent	consider, call, put, hide, spend	SVOОЫ



### **Tense**

- ► Indexical (locate an event in time with reference to the moment of speaking!)
- ► If tense is defined by inflectional marking, English has two tenses: past (walk-ed) and non-past (walk).
- ▶ If tense is not defined by the existence of inflectional marking, English has three tenses to place an event in one of the three possible time spheres.





### Perfect tenses

- ► Not indexical (locate an event in time with reference to some other event!)
- ► Express anteriority to some event in the past (past perfect), the present (present perfect) or in the future (future perfect).

Past perfect	Present perfect	Future perfect
When my parents	In case you are	When you arrive
arrived we had	looking for us,	we'll have
already left	we've already left.	left already.

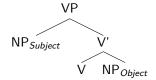
The  $\overline{X}$ -bar schema

Syntax



## The $\overline{X}$ -bar schema

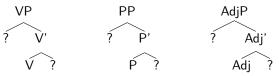
- ► A transitive verb *give* combines with two arguments: the subject and the object.
- (68) a. John loves Mary.
  - b.  $\{John\}_{SubjectNP} \{loves\}_{trans.Verb} \{Mary\}_{ObjectNP}$ .
  - c.  $NP_{Subject} V_{trans.} NP_{Object}$ .





## The $\overline{X}$ -bar schema

- ► The head of the phrase (in this case the verb) projects first to the V-bar and then projects further to the VP.
- ► There are however many kinds of phrases which all have the same projections and thus structure.

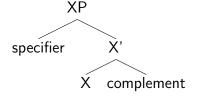


Syntax



## The $\overline{X}$ -bar schema

- ► All phrases have the same projections and thus structure.
- ► This structure is called the X-bar schema





## Characteristics of $\overline{X}$ -bar theory

- ▶ Deep and surface structure As X̄-bar theory is a descendant of generative grammar, sentences as they occur on the "surface" (as we hear and speak them) are derived from a deep structure via various transformations. For instance, the deep structure of the interrogative sentence (surface form) "What did she say?", is the declarative deep structure "She said what".
- Movements In X̄-bar theory, elements are moved and leave traces. For example, the WH-element in open questions is projected from the object DP to the specifier of the CP.



- No S-node as there are only phrases In X̄-bar theory, the S is an IP (in a main clause) or a CP (complementizer phrase in subordinate clauses) and the the subject DP is in the specifier position of the IP.
- ▶ Only binary branching To overcome tertiary branching,  $\overline{X}$ -bar theory assumes projections to which phrases can attach.
- ► Strict lexicon-grammar divide

  The PSRs do not contain any meaning but simply state
  which elements can be combined in which order to
  generate well-formed phrases



### CONSTRUCTION GRAMMAR



### Syntax (rules) and meaning (words)

▶ In all we have talked about so far, we have presumed a distinction between words (which carry meaning) and the rules which tell us how words can be combined.

#### RULES $\leftrightarrow$ WORDS

▶ Also, we have assumed that the sentence structure is determined by the valency or the sub-categorization of the verb.



- (69) John gave Mary a flower.
- (70) Mary baked Jim a cake.
- ▶ In traditional approaches, the rules cannot carry meaning
  - $\rightarrow$  So where does the transfer meaning come from?

The transfer meaning comes from the structure:

Ditransitive CX: 
$$\left\{ \begin{array}{l} \mathsf{NP} \\ \mathsf{DP} \end{array} \right\} \quad \mathsf{V} \quad \left\{ \begin{array}{l} \mathsf{NP} \\ \mathsf{DP} \end{array} \right\} \quad \left\{ \begin{array}{l} \mathsf{NP} \\ \mathsf{DP} \end{array} \right\}$$



### Construction Grammar (CG)

► CG does **not** assume a divide between words and rules but considers language to consist **only** of constructions (form-meaning-pairings).

- ▶ In contrast to approaches which focus on the valency of the verb in specifying the sentences structure, in CG, a speaker chooses a certain sentence pattern (higher level construction) which can be filled with certain verbs.
- ► The argument structure construction (sentence pattern) itself possesses a certain meaning component and together with the meaning of the lower level constructions (words), the meaning of the entire construction emerges.



- ► The mismatch between verb valency and sentence pattern as well as the mismatch between the meaning of the words and the meaning of the whole sentence have led CG proponents to assume that structural elements also possess a meaning component like words.
- ► Abstract structures in which words can be filled in and the words themselves have both a meaning and a form component.
- ► Language consists of lower level (concrete) form-meaning pairings (words) and higher level (abstract) form-meaning pairings (argument structure constructions).



## Table of Contents

Overview

Semiotics

Language and the Brain

History of English

T HOHELICS

Morphology

Cuntary

Syntax

#### Semantics

Semantics

Pragmatics

Sociolinguistics and Language Change

Language Acquisition and Language Learning



# Today's topics and terms

- ► Types of meaning
- ► Semantic analysis
- ► Sense relations
- ► Sentential semantics



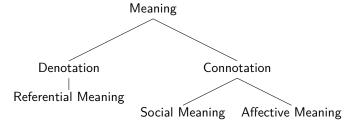
### Semantics

- Semantics
  - ...concerned with referential meaning (denotation).
  - ▶ ...not concerned with what is intended by the speaker.
- ► Types of meaning
  - ► Referential meaning
    - ► Referent: thing in the world referred to by a word
    - ► Sense: idea/concept referred to by a word
    - ► Words always have a sense but they do not necessarily have a referent (bigfoot)
  - ► Social Meaning
    - Information about the speaker's background (lift vs elevator)
  - ► Affective meaning
    - ▶ Information about the speaker's attitude/stance toward sth. (terrorist vs freedom fighter)



## Semantics

- Semantics
  - ...concerned with referential meaning (denotation).
  - ...not concerned with what words connote.





► Two pairs of terms are especially important:

Connotation – Denotation Sense – Reference

- ► The above pairs are useful in explaining the organization of our mental lexicon (how words and meaning are represented and processed in our mind):
  - <Connotation> and <Sense> are related to the language-internal/ intra-linguistic side of meaning.
  - <Denotation> and <Reference> are related to language-external/ extra-linguistic reality.



#### ► Connotation

- Connotations are associations that are evoked by a certain word.
- ► The word in question is defined within the network of words that we think of when we hear that word.
- ► For example, the term "spring" has the connotations blossoms, green meadows, sunny weather, etc.

#### Denotation

- ▶ Denotation refers to the accurate description of terms.
- ▶ Denotations are "definitions" of terms.
- ► The denotation of spring is "Spring is one of the four seasons and follows winter but precedes summer".



#### ▶ Sense

- Sense refers to the meaning of an expression within a language and is defined by its relation to other expressions.
- ► For example, the sense of the term cow is its linguistic description, e.g. "a large four-legged animal kept on farms to produce milk or beef".

#### ► Reference

- ▶ Reference refers to the relationship between a linguistic expression and the person, object, entity or state of affair in the real world to which it refers.
- ► For example, the reference of the term cow are all the cows out there in the world.



- ► Feature-Based Semantics
  - Features are a set of semantic properties which define a term or expression.
  - ► For example, the term bird evokes semantic features like "animate" and "not human", "has feathers" and "has wings".
  - ► The semantic features of the term bird are [+animate], [-human], [+wings], and [+feathers].
  - ▶ When terms are described with regard to their semantic properties, they are broken down into semantic components
  - ► This approach is called componential analysis.



Feature-Based Semantics

Example of a feature matrix...

Semantics



## Branches of Semantics

- ▶ Lexical Semantics
  - ... concerned with the meaning of words
  - ▶ ...the relationships between the meaning of words.
- Sentential Semantics (or Phrasal Semantics)
  - ...deals with meaning of larger syntactic units larger than words, i.e. phrases, clauses and sentences
  - ▶ ...the relationship between them.



## Lexical semantics - Sense Relations

- ► Meaning relations among words
  - ► Words of a language can be related in a number of ways

Relationship	Example
Synonymy	buy - purchase
Antonymy	boy - girl
Homophony	right - write
Polysemy	back: the back of the house — back: to go back
Hyponymy	apple - fruit
Meronymy	face - nose



### ► Synonymy

- Synonymy describes an extensive semantic similarity (semantic relation between words).
- ➤ Synonyms are words with the same or nearly the same meaning (stupid dumb; movie film motion picture flick).
- ▶ Dictionaries in which words with similar meanings are grouped together are called thesauri. A thesaurus contains lists of synonyms.



### ► Antonymy

- ► Opposition of meaning.
- ► Words with opposite meanings are called antonyms.
- Antonyms are opposites with respect to at least one component of their meaning, BUT share other aspects of their meaning.

Types of antonyms				
Туре	Example			
Complementary pairs (Antonyms)	on — off			
Gradable Pairs	cold - warm			
Relational Opposites	employer – employee			
Directional Opposites	arrive — depart			



- Antonymy and word formation
  - Concerning word formation, there are several ways to create antonyms.
  - ► Adding the suffixes {#ee} or {#er} (interviewee − interviewer).
  - ► Adding prefixes like {un#}, {in#}, {non#}, {dis#}, or {mis#} (un-able, in-sane, non-sexist, dis-honest).



- ▶ Polysemy
  - Words that have the same pronunciation
  - Words that differ in meaning
  - ► The different meanings are historically or semantically related.
  - paper (something to write on) paper (scientific publication)
- ► Homophony
  - Words that are pronounced the same.
  - ► The meaning of the words differ.
  - ► The individual meanings of the sound sequences are not related (right /rait/ and write /rait/).



- ► Homography
  - ► Words that are spelled the same, but are not pronounced the same are called homographs.
  - ▶ dove  $/d\alpha v/$  (bird) dove  $/d\alpha v/$  (past tense of dive)
- ► Homonymy
  - ► The term homonymy is oftentimes used synonymously with homophony but it actually refers to words that are identically pronounced and written.
  - ▶ bank /bænk/ (of a river) bank /bænk/ (financial institution)
  - ► race (competition) race (population group)



## ► Hyperonymy

- ► The meaning of one word includes in the meaning of other words.
- ► For example, <fruit> is a hyperonym, because it is super-ordinate to the more specific terms <peach>, <apple>, and <orange>.

#### ► Hyponymy

- ► The meaning of one word is included in the meaning of another.
- ► For example, <peach>, <apple>, and <orange> are hyponyms of the more general expression <fruit>.
- ► Also, <peach>, <apple>, and <orange> are co-hyponyms of the hyperonym <fruit>.



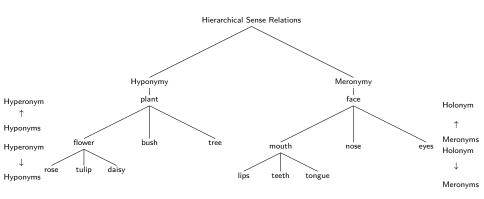
### ► Heteronymy

- ► The relation between different hyponyms is called heteronymy (incompatibility), because if one is true, the other cannot be true at the same time.
- ► For example, if the proposition "X is a turnip" is true, the proposition "X is a rose" must be wrong.

#### Meronymy

- ► Meronymy refers to terms of parts of objects.
- ► The difference between meronyms and hyponyms is that hyponyms refer to a hierarchy and not a part—whole relationship.
- ► For example, <branches> and <trunk> are meronyms of <tree> or <nose> and lips> are meronyms for <face>







## Sentential semantics

- ➤ "Sentential Semantics" (Phrasal Semantics) is the study of the meaning of phrases, clauses, and sentences.
- Sentential semantics is based on the Principle of Compositionality:

The meaning of a phrase or a sentence is determined by the meaning of its component parts and the way they are combined structurally.



## Sentential semantics

- ▶ Formal Semantics
  - ► The type of semantics that approaches meaning by employing the notion of truth is called formal semantics.
  - ► The part of the meaning of a sentence that can be said to be either true or false is called proposition.
  - A proposition is true if, and only if the stated proposition is the case.
  - ► Truth conditions determine when a sentence can be judged as being true.



## Sentential semantics

- ► Sentences have meanings that can be analyzed in terms of their relations to the meaning of other sentences.
- ► There are basically three types of semantic relations between sentences:
  - Paraphrase
  - ► Entailment
  - ► Contradiction



## Paraphrases

- ► Sentences that have the same meaning are said to be paraphrases of each other.
- ► To produce paraphrases it is common so replace one word with a synonymous expression or to rephrase an active sentence in the passive voice or vice versa.
- ► Sentences with the same meaning cannot be true unless both sentences are true.
- ▶ Pairs of sentences that are true under the same circumstances are said to have the same truth conditions.

Semantics



## **Entailment**

- When the being true of one sentence implies the truth of another sentence their relation is referred to as entailment.
  - (71) Anna likes every single kind of fruit.
  - (72) Anna likes oranges.
- ▶ Paraphrases have the same truth conditions and entail each other symmetrically, while the entailment of the sentences above is asymmetrical, because the first sentence entails that the second sentence is true but not vice versa.

Semantics



## Contradiction

- ► Contradiction (negative entailment) means that the truth of one sentence implies the falseness of the other.
- ▶ If the one sentence is true, the other is necessarily false.
  - (73) It's getting hot in here.
  - (74) It's getting cold in here.



# Meaning relations among sentences Meaning relations among pairs of sentences

paraphrase sentence A and sentence B have (nearly) the same meaning

if sentence A is true. sentence B must be true as well

and

if sentence B is true. sentence A must be true as well

contradiction entailment sentence A entails sentence B, but not the other way around.

if sentence A is true, sentence B must be true as well

but

if sentence B is true, we cannot conclude that sentence A is true as well

sentence A and sentence B contradict

each other

if sentence A is true. sentence B must be false

and

if sentence B is true. sentence A must be



# Sentence Meaning and Syntax

- ► The meaning of a sentence depends on how words can be combined. Accordingly, syntax and lexical semantics are essential for the correct interpretation of sentence meaning.
- ► Although sentences may consist out of the same words, their meaning can still vary.
- ► Example (subject and object are exchanged)
  - (75) Eric kills Kenny.
  - (76) Kenny kills Eric.
- ► In such cases the *Principle of Compositionality proves* to be valid.



## Limits of Compositionality

- ► The Principle of Compositionality has its limits
  - (77) Kenny has passed away.
  - (78) Kenny bites the dust.
- ▶ Both sentences have the same meaning: Kenny is dead.
- ► However, the meaning cannot immediately be derived from the individual meanings of the words.
- ► Fixed phrases such as to pass away or to bite the dust are called idioms (or idiomatic phrases).
- ► Like exocentric compounds, the meaning of idioms cannot be predicted from the words (morphemes) they are made up of.



## Presuppositions

- Understanding the meaning of sentences depends not only on the semantic and syntactic properties of sentences, but also an the assumptions and beliefs of hearer and listener.
- ► Such assumptions and beliefs are called presuppositions; e.g. "I shot the sheriff" presupposes that I pulled the trigger of that gun.
- ► Presuppositions differ from entailments in that presuppositions also hold true when the presupposing sentence is negated.



# Presuppositions

- ► Words that trigger certain assumptions are called presupposition-triggers.
- ► The expression <managed> in the following example:
  - (79) She managed to open the door.
  - presupposes the sentence
    - (80) She tried to open the door.
- Since presuppositions play an important role in the correct interpretation of meaning in context, they are on the boundary between semantics and pragmatics.



# **Entailment and Presupposition**

#### Entailment

- ► relation between sentence meanings, or propositions
- ► sentence meaning A entails B if whenever A is true, then B must also be true
- ► very strong kind of implication
- ► It is a semantic relation thus, it holds no matter what the facts of the world happen to be (it holds in all possible worlds).
- (81) Mary broke the window (entailment: The window broke)
- (82) Sue and Fred went to the party (entailment: Sue went to the party)



## **Entailment and Presupposition**

## Presupposition

- (pragmatic) implications that are often felt to be in the background — to be assumed by the speaker to be already known to the addressee.
- ▶ good diagnostic: presuppositions remain constant under
  - Negation (denial)
  - Questioning
  - Embedding under modals (e.g. might, it is possible that)
  - Embedding as the antecedent of a conditional (i.e. in an if-clause).



# **Entailment and Presupposition**

#### Presupposition

- ► A speaker of any of the sentences below would be presupposing that there is a king of Belgium.
- (83) The king of Belgium is bald.
- (84) The king of Belgium is not bald.
- (85) Is the king of Belgium bald?
- (86) The king of Belgium might be bald. Possibly the king of France is bald.
- (87) If the king of Belgium is bald, he should wear a hat in the winter.



## Table of Contents

Overview

Semiotics

Language and the Brain

History of English

I HOHELICS

Phonology

Morphology

Syntax

Semantics

#### Semantics

Pragmatics

Sociolinguistics and Language Change

Language Acquisition and Language Learning



# Today's topics and terms

- ► Categorization
- Prototypes
- ► Frame semantics
- ► Metaphor and metonymy



### Categorization

- ► Understand something as being part of a group.
- ► Categories reflect our interpretation of the world.
- ightharpoonup Categorization  $\neq$  Classical feature based semantics

man	woman	boy	girl
[+human]	[+human]	[+human]	[+human]
[+adult]	[+adult]	[-adult]	[-adult]
[+male]	[-male]	[+male]	[-male]



Cognitive Semantics (Prototype Semantics)



## Cognitive Semantics (Prototype Semantics)

- ► Let's do a little experiment!
  - ► Take out a sheet of paper and a biro (ball pen).
  - On the following slides, you will see one term denoting a category per slide.
  - As soon as you see the term, come up with 5 members belonging to that category and write them down in German (write those members down that come to (your) mind first).



**VOGEL** 



WERKZEUG



MÖBELSTÜCK



**FARBE** 



**GEFÜHL** 



(in English)

**PREPOSITION** 

Semantics



## Semantics: Prototypes and Categorization

#### Cognitive Semantics (Prototype Semantics)

- ► Let's do a little experiment!
  - ► Take out a sheet of paper and a biro (ball pen).
  - On the following slides, you will see one term denoting a category per slide.
  - As soon as you see the term, come up with 2 members belonging to that category and draw them (draw those members down that come to (your) mind first).



**DREIECK** 



**RECHTECK** 



#### Cognitive Semantics (Prototype Semantics)

- ► All of you had . . .
  - ► Amsel or Spatz for Vogel OR
  - ► Hammer or Schraubenzieher for WERKZEUG OR
  - ► Tisch or Stuhl for MÖBELSTÜCK OR
  - ► Rot or Blau for FARBE OR
  - ► Liebe or Angst for GEFÜHL OR
  - ▶ to or of for PREPOSITION...



Cognitive Semantics (Prototype Semantics)

► Those of you who did not have any of these terms are weird and will probably become serial killers (jk)!

Dr. Martin Schweinberger



Cognitive Semantics (Prototype Semantics)

- ► With respect to DREIECK and VIERECK ...
  - ▶ I predict that most of you have drawn shapes that do not have an angle less than 15 degrees OR one side being more than 3 times the length of another.



Cognitive Semantics (Prototype Semantics)

- Since about the 1980s language is understood as part of our cognitive ability through which we organize and classify all aspects of our experience.
- Cognitive semantics is based upon the assumption that meaning is linked to the way we mentally group all kinds of perceptions and phenomena into conceptual categories.
- Categorization and conceptualization are based on the comparison of new things with ones we already know and the resulting cognitive construction of similarities between different entities.



#### Sprachspiele (L. Wittgenstein)

- ▶ Definition of GAME!
  - opponents
  - winners and losers
  - ▶ played for fun
  - ► need luck or skills
- ► There are *better* and *worse* games (depending on the number of critera/features they possess)



#### Prototypicality

- ▶ High degree of prototypicality
  - goodness-of-fit (features)
  - speed of verification
  - priming



Cognitive Semantics (Prototype Semantics)

- Some concepts of expressions like the PRESIDENT OF THE UNITED STATES are rather clear-cut, while other concepts like those of STRONG or TALL are rather fuzzy.
- ► Fuzzy concepts are characteristic of the human conceptual system.
- ► Many concepts do not only have fuzzy boundaries, but can also be graded according to their typicality.
- ► For example, *robins* and *sparrows* are more birdlike, i.e. more prototypical than *penguins* or *ostriches*.
- ► Prototypes, such as *robins* for the concept BIRD are cognitive reference points.



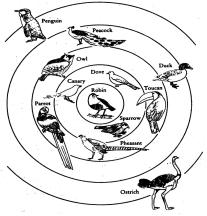


Figure 5.1 Birdiness rankings

Dr. Martin Schweinberger 340

#### Priming

Semantics



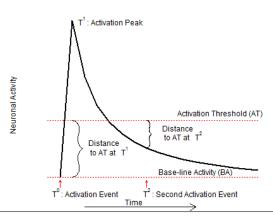
### Priming

#### What is priming?

- Priming refers to the tendency of speakers to repeat previously used words/sentences or to use elements which are semantically related to concepts previously invoked.
- ► For example, If someone greets you with "Hello!" it is more likely than not for you to reply with "Hello!" rather than some equivalent alternative such as "Hey!"
- ➤ Similarly, you are more likely to say "kind of" than "sort of" if "kind of" was used shortly before.



# Priming





### Priming

#### Types of priming

- ► Form priming skin → skill (vs craft)
- ► Structural priming The dog bit the cat → The boy ate the cookie (vs The cookie was eaten by the boy)
- ▶ Semantic priming Doctor → Nurse

#### SEMANTIC FIELD THEORY



Semantic Field Theory

- ► Let's do a little experiment!
  - ► I need a volunteer!



#### Semantic Field Theory

- ► Semantic field theory is based on the structuralist approach towards semantic analysis
- Structuralist approaches are based upon the assumption that every linguistic element is defined by a network of meaning relations.
- ► In the 1930s the structuralist assumption was applied to a new approach called Semantic Field Theory (SFT).



#### Semantic Field Theory

► The basic assumption of SFT is that words don't exist in isolation, but form so-called semantic fields /lexical fields together with other related words.

"The meaning of one term is defined by its relation to other terms."

► For example, color terms like "red" and "blue" are related, because they both belong to the semantic field COLOR.



Semantics



### Semantics: Prototypes and Categorization

- ► The basic assumption of Frame Semantics is that words and utterances are linked to behavior.
- Behavior is structured by so-called frames (or scripts)
- ► For example, the word "purchase" is part of the frame FINANCIAL TRANSACTION which also involves someone who buys something, someone who is selling something, some transfer of money, and some transfer of goods.



- ► Words trigger frames and are understood with respect to these frames.
  - (88) We approached the shore.
  - (89) We approached the coast.
  - (90) Captain Miller stayed on the ground.
  - (91) Captain Miller stayed on the land.

Semantics



## Semantics: Prototypes and Categorization

- ► Frames are culture specific and reflect cultural practices
- ► Collocates of "washing" in Tanzanian and British English.
- ▶ Basic sentence types reflect Semantic Frames (think of the ditransitive construction which is related to the Semantic Frame of a TRANSACTION.





- ► What is a metaphor? (provide an example)
- ► In which texts do you typically find metaphors?



#### Cognitive Semantics (Metaphor)

- ► Another important notion in cognitive semantics is the assumption that concepts are interconnected.
- ▶ In many cases, one concept can be understood in terms of another. This type of interconnection is called METAPHOR.

The essence of metaphor is understanding one thing in terms of another. (Lakoff and Johnson 1980)



- ► In Linguistics, metaphors are a part of the conceptual system that is shared by all human beings.
- Metaphors are so very common that their use isn't even noticed
- ► In everyday language time is frequently treated as a valuable commodity or as a spatial property.
  - (92) Invest your time profitably and study linguistics!
  - (93) Back in the days!
  - (94) The day before yesterday . . .
  - (95) Who won the argument?



- ► Example: talking about arguments . . .
  - (96) She attacked every weak point in my argument.
  - (97) He couldn't defend his points.
  - (98) They got a lot of flak for their proposal.
  - (99) That argument is weak.
- Being in an argument is viewed (and talked about/conceptualized) as being in a WAR.
- ► this is the WAR FOR ARGUMENT OF ARGUMENT AS WAR metaphor



- ▶ One term is taken from a source domain (typically the concrete, physical sphere) and applied to a target domain (typically a more abstract or psychological sphere), but only certain features of the concrete meaning are applied to the abstract (metaphorical) meaning.
- ▶ Metaphorical mapping

SOURCE DOMAIN	mapping	TARGET DOMAIN
Fighting parties Attacking Defending	$\begin{array}{c} \rightarrow \\ \rightarrow \\ \rightarrow \\ \rightarrow \end{array}$	Participants Raising objections Maintaining one's opinion
Surrendering	$\rightarrow$ $\rightarrow$	Giving up one's opinion



- ► Task: identify the conceptual metaphors underlying the sentences below and explain why.
  - (100) The Iraqi democracy is still in its infancy.
  - (101) Only a stable, prolonged US troops presence and a weak Iraqi army will allow us to nurture democracy.
  - (102) The correct US policy is thus to stay the course and provide security until Iraqi democracy is strong enough to survive on its own.



- ► Example: SPACE for TIME metaphor
  - (103) I'll meet you at five o'clock.
  - (104) What lies ahead . . .
  - (105) Looking back, I regret nothing!
  - (106) I'll work until five o'clock.

SOURCE DOMAIN	mapping	TARGET DOMAIN
locations	$\rightarrow$	specific times
path not yet trodden	$\rightarrow$	future
path already walked	$\rightarrow$	past
spatial barriers (walls)	$\rightarrow$	end/beginning of timespan



### Cognitive Semantics (Metaphor)

- ► Metaphors enable communication about abstract concepts by allowing us to talk about one thing in terms of another
- ► Metaphors work by mapping cognitive structures from a source domain to a target domain.
- ► Metaphors help us understand/make sense of the world around us.



### Metonymy

- ► Metonymy concern mapping within domains not between domains (metaphor)
  - (107) How much is the Picasso?
  - (108) I like to read Camus.
  - (109) Shakespeare is on the top shelf.
    - ► PRODUCER → PRODUCT
      - (110) I see a lot of new faces.
      - (111) We need a couple of strong bodies for that.
      - (112) Google hires the best brains.
    - ► PART OF PERSON → WHOLE PERSON



### Metonymy

- Metonymy concern mapping within domains not between domains (metaphor)
  - (113) The guitar is too loud.
  - (114) She was in tears.
  - (115) The movie was sad.
    - ► CAUSE → EFFECT
  - (116) Pearl Harbor still affects current US policy.
    - ► PLACE → EVENTS
  - (117) Germany beat Brazil in the World Cup.
    - ▶ COUNTRY → REPRESENTATIVES OF A COUNTRY



### Metonymy

- Metonymy is referring to one entity by means of another related entity.
- ► Two entities belong to the same semantic domain. Semantic shift within the same semantic category. Metonymy follows principles that can be stated as . . . PART FOR WHOLE CAUSE FOR EFFECT PRODUCER FOR PRODUCT

. . .



### Metonymy

- ▶ Identify the metonymies in the following sentences.
  - (118) France opposed the war in Iraq.
  - (119) Spaghetti are my favorite dish.
  - (120) The ham sandwich left without paying.
  - (121) This weekend, Britain goes to the ballot.



### Table of Contents

Overview

Semiotics

Language and the Brain

History of English

n Horictics

Morphology

Syntax

Semantics

Semantics

### Pragmatics

Sociolinguistics and Language Change

Language Acquisition and Language Learning



### Today's topics and terms

- ► Extra-sentential meaning
- Deixis
- ► Context
- ► Coreferentiality
- ► Speech acts
- Conversational implicatures



What is pragmatics?

- Pragmatics is the study of meaning in context.
- ► The same sentence can have different meaning depending on the context in which it is uttered.
  - (122) A police man is right around the corner! (Two criminals discuss whether or not to rob a store)
  - (123) A police man is right around the corner!(A tourists asks someone for directions)
  - (124) A police man is right around the corner! (A person being threatened by someone)



### What is pragmatics?

▶ Pragmatics examines how speakers understand and communicate more than the literal meaning of words and sentences. The type of meaning studied in pragmatics is known as utterance meaning, meaning in context or meaning in interaction. In short, pragmatics is about getting from what is said to what is meant.

Becker and Bieswanger (2006: 161)



#### Utterance

- ► Another definition for Pragmatics is that it is the scientific study of the interpretation and production of utterances.
- Utterances are spoken, written or gestured contributions whose meaning depends on the social context of the speech situation.
- ► In spoken language analysis an utterance is a smallest independent unit of speech.



### What is pragmatics?

- ► Focuses on linguistic performance (parole) rather than on the underlying linguistic system (langue).
- ▶ In a narrow definition, pragmatics is regarded as a sub-discipline of semantics, i.e. it deals with meaning in communication. Communication is conceived of as negotiation of meaning between interlocutors.
- ► Meaning is mostly implicit. It is the goal of the hearer to recognize the speaker's communicative intention.



(125) The telephone is ringing...

A: The telephone is ringing!

B: I'm in the bath!

A: Okay, okay . . . I'll get it . . .

- ➤ Speaker A does not simply say that the telephone is ringing and speaker B does not merely say that he/she is in the bath.
- ► Speaker A's utterance is a request and speaker B's reply provides a reason why he/she cannot comply with this request.



Micropragmatics (conversational pragmatics)

- Micropragmatics allows us to bridge the gap between the propositional meaning and the meaning a utterance has within a certain context (the gap between what is said and what is meant).
- ► Pragmatics = meaning minus semantics.



# Semantics and Pragmatics

Semantics	Pragmatics
context invariant	context sensitive
speaker independent meaning	speaker dependent meaning
meaning potential	concrete meaning
What does X mean	What does speaker A mean by uttering X
conventional meaning	non-conventional meaning
what is said	what is meant
Description of meaning,	Bridging the gap
meaning relations,	between what is said
and meaning combinations	and what is meant



## Intercultural Pragmatics

- ► Language use and understanding of utterances is to a certain extent language specific
- ► Linguistic communities differ according to what is said how when and why to whom about someone else.
- ► Knowing the semantic and syntactic properties of a language is not sufficient for real life communication.
- ► What is missing?
  - ► Pragmatic competence
  - Ability to use language appropriately within social contexts



# Philosophy of meaning

- ▶ Pragmatics was not introduced by linguists but by proponents of *philosophy of language* who were dissatisfied by the application of formal logic to the analysis of natural languages.
  - ► In truth- conditional semantics, the fact that meaning was context-dependent was ignored.
  - ► Statements were analyzed as propositions that had truth conditions (under which conditions is a statement true or false) and truth values (being either true or false).
  - ► This critique was put forward by the late Wittgenstein, Searle, Austin, and Grice who regarded themselves as a counter movement to traditional logic which ignored central aspects of natural language and ordinary communication.



Code model of communication

 $\mathsf{Speaker} : \mathsf{thought} \xrightarrow{\mathsf{encoding}} \mathsf{message} \xrightarrow{\mathsf{decoding}} \mathsf{thought} : \mathsf{Hearer}$ 

Dr. Martin Schweinberger



Problems of the code model of communication

- ▶ Disregards context.
- ► Neglects the role of inference.



#### What is context?

- ► Context makes things go without saying
- Context is always available (as a resource)
- ► Meaning is (almost) always context-bound

### Aspects of context

- ► Physical environment (e.g. place deixis)
- ► Participants (e.g. person deixis)
- Social setting (e.g. who you are talking to and where you are talking to them)
- ▶ Prior discourse (discourse deixis)
- Cultural norms/expectations (e.g. politeness; face-saving/directness)



#### What is Inference?

- Conveyed message goes beyond/is not identical to what is literally said
- ► Hearers infer what is meant (what is intended).
- ► The message is enriched by the hearer.
- ► Relying on inference is the norm in language.



What is Inference?

- (126) Since Bob runs the coffee shop, the espresso tastes a bit funny.
- (127) Bob is poor but honest (careful! relies on social stereotypes: poor people are typically not honest)
- (128) The king had a heart attack and a republic was declared.
- (129) A republic was declared and the king had a heart attack.



 $\begin{array}{ccc} \text{What is said} & \text{What is meant} \\ \text{What does X mean?} & \xrightarrow{} & \text{What do you mean by X?} \end{array}$ 

► Locution: what is said

► Illocution: what is meant/intended



### Deixis and Context

- ► Imagine you find a piece of paper with the note:
  - (130) I'll see you there tomorrow.
- What do <l>, <you>, <there>, and <tomorrow> refer to?
- ► Greek deiknynai: "to point"/ "to show"
- ► Pointing to extra-linguistic contexts
- ▶ Deictic expressions
  - ► Also called deictics or indexicals (lat.: indicare)
  - Expressions that are used to point at someone or something
  - ► Meaning is context dependent



### Deixis and Context

- ▶ Person deixis
  - ► Referring to persons (I, you, she, he, it, etc.)

#### Place deixis

► Referring to locations (here, there, left, right, ect.)

#### Time deixis

 Referring to points or stretches of time (today, tomorrow, etc.)

#### Social deixis

► Reflecting social structures (dt.: Sie vs. Du)

#### Discourse deixis

► Refers to activities within texts (... as mentioned in section 3)



### **Deixis**



The ball is to the right of the car. 
The ball is behind the car.

Dr. Martin Schweinberger 385



### Deixis and Context

- ► Deictic Center (Origo; Karl Bühler 1934)
  - When we speak to other people we tend to take their perspective
  - ► Perspective dependency
  - ► Ego of the other person become the deictic center. This is called deictic projection
  - Deictic projection
    - ► Identifying the deictic center is crucial for the correct interpretation of all deictic expressions
    - ► Important for place deixis, especially



### Social deixis

### T/V distinction

- ► Lat.: tu (2nd pers. singular) vs. vos (2nd pers. singular and plural)
- ▶ Dt.: Du (2nd pers. singular) vs. Sie (2nd pers. singular and plural)
- ► Important for the right choice of form of address
- ► First name, surname, title, office?
  - ► John?
  - ► Mr. Smith?
  - ► Dr. Smith?
  - ► Sergeant Smith?



### Place deixis

"Pointing" at a location

(131) You there in the last row!

- ► Closeness and Distance
  - ► English and German distinguish between entities close to the origo and entities that are further away.
  - Proximal terms
    - ► here/ hier and this/ dieses
  - Distal terms
    - ► there/ da, dort and that/ jenes
    - often used to express psychological distance

```
(132) ... that boring book ...
```

(133) ... that awful lesson ...



### Time deixis

"Pointing" at a point in time or a time span.

- (134) Martin was here yesterday!
  - ► Terms used to refer to time are commonly adopted from the terminology used to refer to places and spatial relations.
- (135) now, soon, then, ago, today, yesterday, tomorrow, present, actual, current, former, future, next, last.

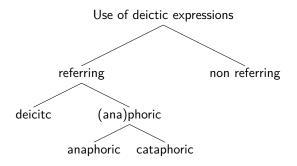


### Coreferentiality

- ► Some deictic expressions, i.e. anaphoric expressions are used to refer not deictically, but refer to entities that have been introduced before or will be introduced later on.
- Anaphora
  - ► Referents of a anaphoric expressions have been introduced before.
    - (136) <u>Sally</u> went to the pub, and <u>she</u> only went home when the sun had started to rise.
- Cataphora
  - ► Referent of a cataphoric expressions are introduced later.
    - (137) <u>He</u> saw her, but only seconds later <u>George</u> recognized her.



# Coreferentiality





- ► The "new" school of philosophers of language introduced two important pragmatic theories: Speech Act Theory and the Theory of Conversational Implicatures.
- ► Speech Act Theory (Austin and Searle)
  - ► Language does not (solely) consist of statements about the world and cannot be assessed in terms of truth conditions.
  - ► Truth conditions are not useful in order to understand the underlying intentions of the speaker.
    - (138) Happy birthday!
    - (139) Merry Christmas!
    - (140) Will you go to the dance with me?
    - (141) I hereby declare the meeting closed!



- ► The relevant information, i.e. the actual message is implicit, not explicit!
- The relevant aspects of meaning which are relevant to truth-conditional semantics under-specify the message conveyed.
  - 1. Language is used to communicate and only successful, if the hearer grasps the intended meaning.
- Verbal interaction is defined as a speech act.
- ► Speech acts can differ in respect to their illocution (=intended meanings), i.e. the same message can be intended to be a threat, a compliment, a request, ...



Direct Speech Acts

- (142) Please clean the dishes!
- (143) I bet you 5 € that the HSV will win.
- (144) I hereby declare you husband and wife.
  - ► Locution and illocution coincide.



Indirect Speech Acts

- (145) The dishes are dirty!
- (146) It's pretty cold in here.
- (147) A: Do you wanna have a drink tonight?B: I gotta study.
  - ► Locution and illocution do not coincide.



# Types of Speech Acts

- Representatives
  - Used to describe the world (state, claim, describe, ...)
- Directives
  - ► Used to get people to do things (give an order, or ask so. to do. sth., ...)
- Commissives
  - Express commitment to a future action (promising, threatening, ...)
- Expressives
  - Employed to express feelings and opinions (thank, greet, apologize, ...)
- Declarations
  - Used to express a change of affairs
     (baptisms, marriages, divorces, declarations of war, . . . )



### Types of Speech Acts

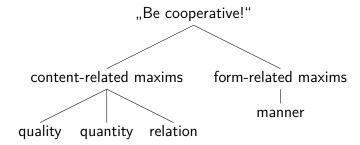
- ► Direct and indirect speech acts
  - ► All speech acts are either *direct*, i.e. explicit (secondary) or *indirect*, i.e. implicit (primary).
  - ► Implicit requests are performed by means of direct speech:
    - (148) It is freezing in here!
  - ► The implication being the indirect request "Please shut the window!".
  - ► The primary intention is commonly the implied one (hence, the primary/secondary distinction).



► Grice invented the notion of *conversational implicatures* and described what is known as the *Cooperative Principle*.

#### Cooperative Principle

- Make your conversational contribution such as required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged!
- ► All speakers co-operate, even when they argue!
- ► We all adhere to certain principles or maxims that make communication possible.
- ► What are these maxims?





- ► Quantity
  - Make your contribution as informative as is required for the current purposes of the exchange.
  - (149) A: Do you have hobbies?

B: Yeah, I play table tennis.

B: \*Yeah, I don't play football, I don't play chess, I don't like swimming, but I play table tennis.

- ▶ Relation
  - ► Be relevant. Do not change the topic.
  - (150) A: Do you have any hobbies?

B: I work a lot. (therefore I do not have any hobbies; explain many indirect speech acts)

B: \*My nose is itching.



- ► Quality
  - Make your contribution one that is true. Do not say what you believe to be false.
  - (151) A: Could I have your lighter for a second?B: (smoking a cigarette) Sorry, I also got fire from someone else.
    - B: \*I don't smoke.



#### ▶ Manner

► Be perspicious: avoid obscurity of expression, avoid ambiguity, and orderly.

#### (152) A: What happened?

B: The man came in, he pulled a gun, forced the clerk to hand over the money, and then left in a yellow car.

B: \*He left, forced the clerk to hand over the money, then left in a yellow car, the man came in, he pulled a gun, and forced the clerk to hand over the money.



- ► The maxims of conversational implicatures are descriptive and reflect everyday behavior.
- ► The maxims of conversational implicatures are not the only principles relevant for communication. Other principles that are highly relevant are principles like principles of politeness or of face-saving.
- One important aspect of conversational implicatures is cancellability, i.e. they can be canceled without a sense of contradiction.
  - (153) I need someone who speaks Russian OR Polish!
  - (154) Of course anyone speaking both languages is welcome.



### Table of Contents

Overview

Semiotics

Language and the Brain

History of English

DI

Morphology

Syntax

Semantics

Semantics

Pragmatics

#### Sociolinguistics and Language Change

Language Acquisition and Language Learning



### Sociolinguistics and Language Change

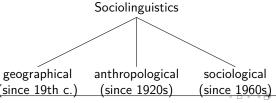
#### Today's topics and terms

- Varieties
- Ordered heterogeneity
- ► Apparent time and real time
- Dialectology
- ► Social factors in language change



### Sociolinguistics

- Sociolinguistics
  - "Its aim is to study the use of different forms or varieties of language and the social factors which determine them."(Kortmann 2020: 254)
- Sociology of language
  - ▶ "Its motivation for investigating language is to increase the ability to understand social structures." (Kortmann 2020: 254)



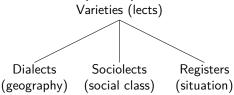


### Types of sociolinguistics

- ► Geographical sociolinguistics/Dialectology (since 19th c.)
  - ▶ studies the variation in the phonological and lexical system of NORMs (non-mobile, old, rural males) using questionnaires, word lists and tape recording; isoglosses (boundaries on language maps)
- ► Anthropological sociolinguistics (since 1920s)
  - ► studies the relationship between language, culture and thought; e.g. to which extent do linguistic structures determine thought and ultimately perception (Sapir-Whorf Hypothesis)
- ► Sociological sociolinguistics (since 1960s)
  - studies the variation of language use with regard to sociological variables such as gender, age, ethnicity, etc., by employing quantitative methodology (statistics)



# Types of varieties (lects)



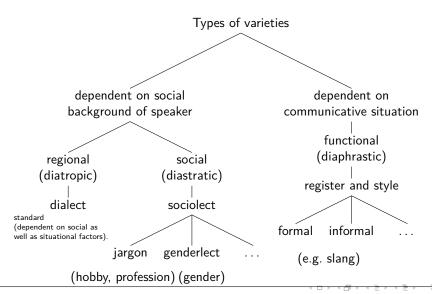
- ▶ Dialects
  - regionally restricted varieties (narrow sense)
  - ► same as 'variety': social dialect (broad sense)
- Sociolects
  - ▶ motivated by socio-economic status, level of education, profession, age, ethnicity, sex, . . . (genderlect, jargon)
- Register (only vocabulary; if also grammar: style)
  - varieties determined by communicative situation



# Types of varieties (lects)

- ► Varieties versus "the Standard"
  - From a linguistic point of view, they are different, but not inferior, because the structural properties of any variety have the same value or quality as any other variety.
  - Standard varieties, however, do enjoy higher prestige.
  - ► Standard varieties are used in education, broadcast, written language, politics, courts,...
  - Varieties become "standards" because of social and functional considerations NOT because of structural (linguistic) properties!
  - ightharpoonup Standard  $\sim$  common structural core of various different lects.







### Sociolinguistics

- ► Language communities are not homogeneous; instead heterogeneity determines everyday language use.
- ► Not only do different groups within language communities differ, but even each speaker has his or her own idiolect.
- ► According to the communicative situation and the speaker's expressive ability, all language users chose different language forms the different form of a language are called varieties (or lects).



## Sociolinguistics

- One speaker social belongs to different groups, thus has many selves, i.e. exists within a diversity of co-existing group identities and uses language according to the role one fulfills.
- Sociolinguistics is the study of which factors (variables) determine which linguistic form and describe which features a variety possesses or lacks.



### Types of Varieties

- Group identities are formed by geographical, social and/or ethnic background, but other factors such as age, sex, profession and level of education also influence linguistic performance.
- ► Few words suffice to make us form inferences about a speaker's social background, level of education, etc and signal that he or she "wants" to belong/belong to a certain social group.



### Types of Varieties

- ► How do the terms "variety" and "dialect" relate to "standard" and "language"?
  - Dialects and varieties are not inferior but they are of no higher value or quality than other forms of a language.
  - Nevertheless, some (standard) varieties enjoy higher prestige.
  - ► The characterization of one variety as the standard variety of a language is based on social and functional considerations, not on linguistic considerations.



### Language and Prestige

Varieties differ with respect to the type of prestige they possess

- Overt prestige
   Generally accepted norm of speaking irrespective of other
   social factors (typically standard varieties carry overt
   prestige)
- Covert prestige
   Norm of speaking that is favored within certain social
   groups (regional varieties may enjoy covert prestige but
   also slang etc.)



### The Standard

- ► Standards are (functional) varieties that carry overt prestige and they are relatively homogeneous, i.e. there are few regional differences in the standard varieties of geographical varieties (Traditional Englishes vs. New Englishes).
- ▶ Due to its special functional role, the standard may be regarded as a fourth (main) type of variety.
- ► In all language communities, the standard variety is only spoken by a small number of speakers.
- ► The standard variety commonly serves as a reference variety if varieties are compared.



### Variation and change

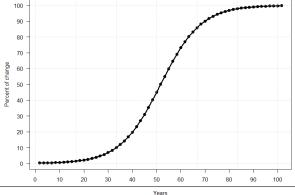
How do we bridge the gap between synchrony and diachrony?

- ► Some sections of society use more advanced language while other groups are more conservative in their language use
- ▶ With regard to phonetic/phonological innovations, the language of speakers stabilizes between the ages of 17 and 25. Older speakers rarely adopt new variants after that age.
- Variation among certain social groups is adopted by other groups.
- ► Innovations spread from an epicenter outward and diffuse through the lexicon and the speech community.



### The s-shaped curve

The s-shaped curve describes how innovations replace more traditional variants over time.



# Patterns or Types of Change

	Individual	Community
Stability	Stable	Stable
Age-grading	Unstable	Stable
Generational change	Stable	Unstable
Communal change	Unstable	Unstable



### Patterns or Types of Change

#### Change from above

 Conscious adoption of innovations to signal prestige (to mark membership to a certain social milieu; has somewhat prescriptive and stylistic in character)

#### Change from below

 Unconscious adoption of innovations (speakers are not aware of using innovative features and often speak out against their use)

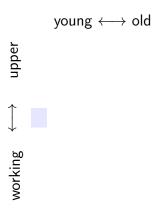


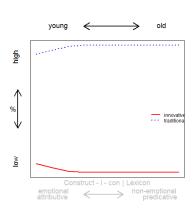
## Patterns or Types of Change

#### Diffusion

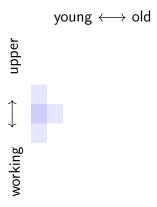
- through society
- ► through the lexicon

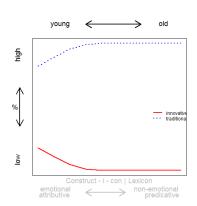




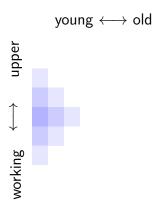


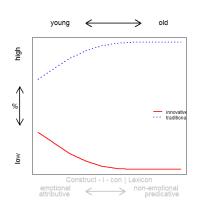




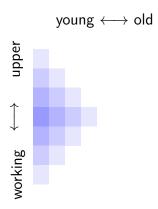


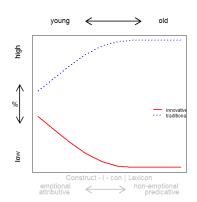




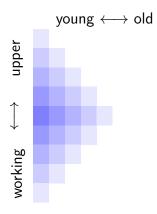


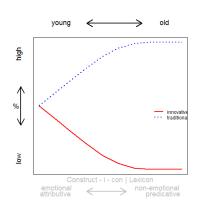




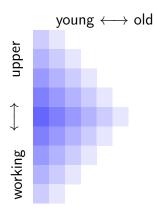


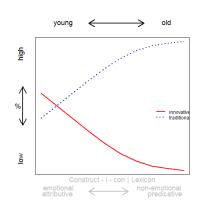




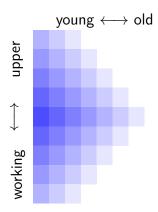


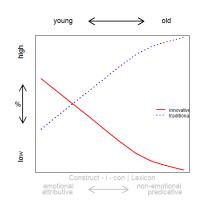




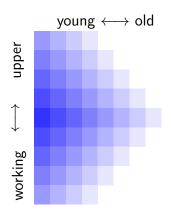


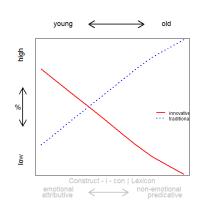




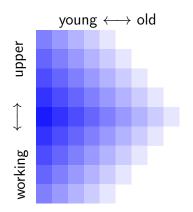


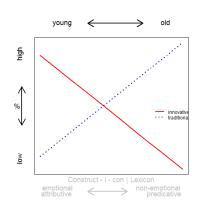




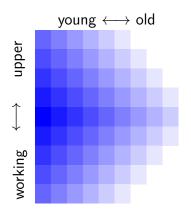


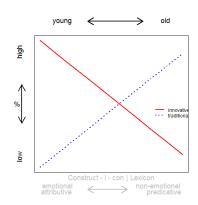




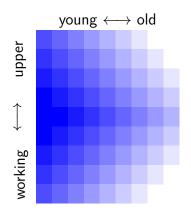


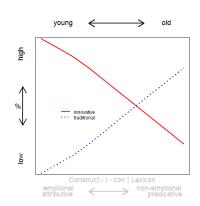




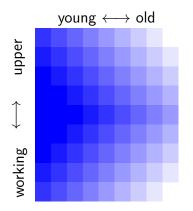


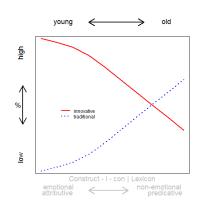




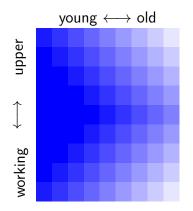


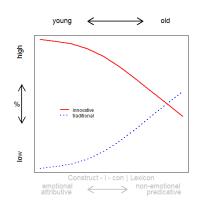




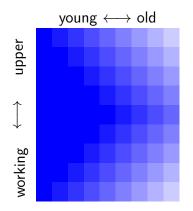


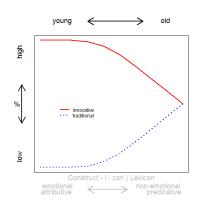




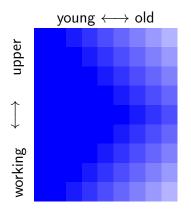


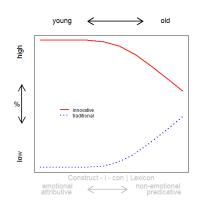




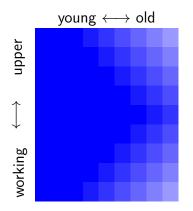


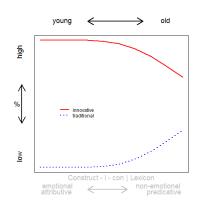




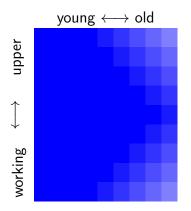


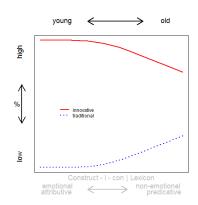




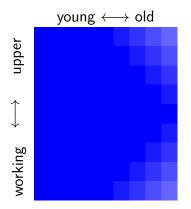


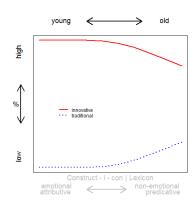




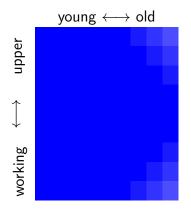


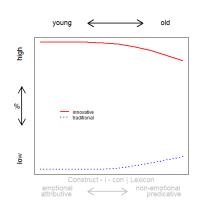




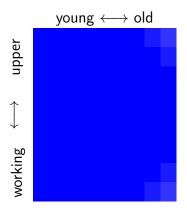


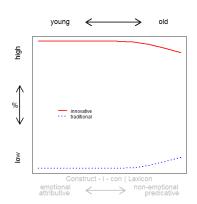




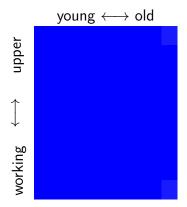


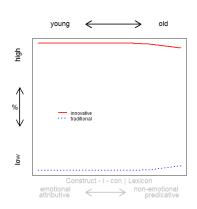




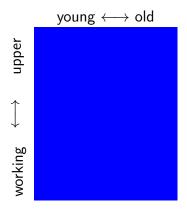


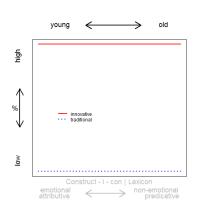




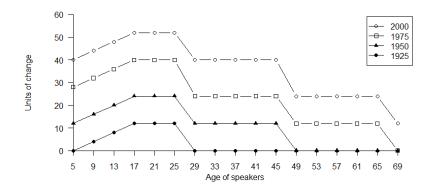








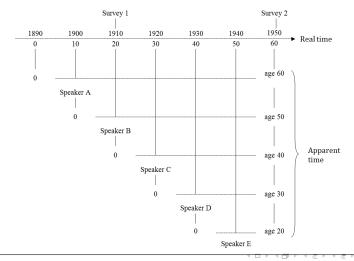






- ► Changes can be investigated by . . .
  - taking and apparent time approach analyzing language use of different age groups at one point in time.
  - taking a real time approach analyzing language use of the same age groups at different points in time.







# Change in apparent and real time: syntactic diffusion of *like* (D'Arcy 2005: 209)

(132) It LIKE went LIKE seamlessly into it. (N/p/m/20)

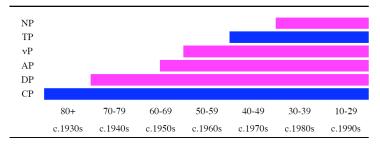


FIGURE 8.1 Generalization of LIKE across maximal projections apparent-time (darker shading denotes the marker; lighter shading denotes the particle)



### Language and age

► The willingness of speakers to conform to prestige norms differs with respect to the speaker's age

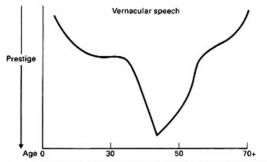


Figure 7.3 Relationship between use of vernacular forms and age. (Reproduced from Downes 1984: 191)

#### LANGUAGE AND SPACE

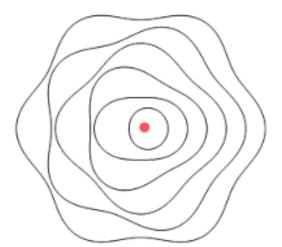


## Language and Space

- ► Wave model 1 Linguistic innovations spread from an epicenter outwards
- ► Wave model 2 Model introduced as a reaction to the tree model in diachronic linguistics to account for a mixture of features encountered in many languages.
- Cascade/Density model
   Innovations spread to high-density/gravity centers first and then subsequently to lower density/gravity centers

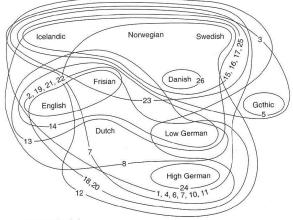


## Language and Space: Wave model 1





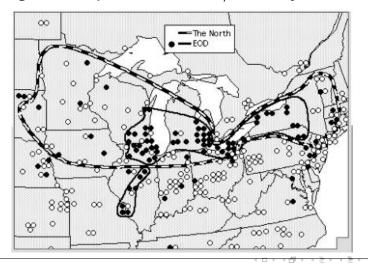
## Language and Space: Wave model 2



- 1 /ae:/ backed to /a:/
- 2 /a:/ from earlier /ae:/ restored
- 3 'sharpening'
- 4 /z/>/r/
- 10/1



### Language and Space: Cascade/Density model



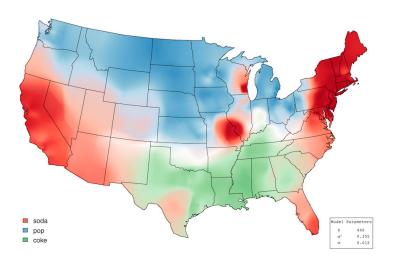


## Language and Space

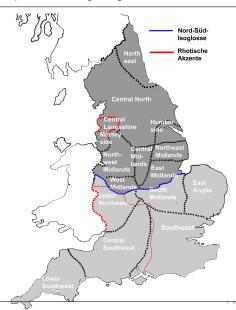
#### Dialect boundaries: Isoglosses

- Especially in traditional dialectology, linguists were interested in geographical differences in language use
- Data gathered form conservative language users (NORMs)
- ► Traditional dialectologists used interviews and questionnaires to detect which words were used in which region to establish dialect boundaries (isoglosses)

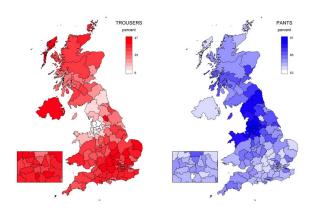














#### WILLIAM LABOV: THE SOCIAL STRATIFICATION OF ENGLISH IN NEW YORK CITY (1966)



# William Labov: The Social Stratification of English in New York City (1966)

- classic study on the social stratification of (r) in N.Y.C. department stores
- variants of the phonological variable (r) are either presence or absence of post-vocalic /r/ (in expressions such as fourth floor /r/ was either pronounced or omitted)
- New York City speech had historically been a non-rhotic accent
- general attitude towards this accent feature was rather negative and the pronunciation of /r/ seems to have been reintroduced



# William Labov: The Social Stratification of English in New York City (1966)

- ► Labov studied the speech of employees in three department stores in Manhattan
  - Saks Fifth Avenue (an expensive upper middle-class store)
  - Macy's (a less expensive middle-class store)
  - S. Klein (a discount store frequented mainly by working-class New Yorkers)
- ► Labov asked employees questions which should elicit the lexical items ('fourth floor') containing the desired accent feature:
  - 1. "Where can I find the lamps?" Elicited answer: "fourth floor."

2. "Excuse me?" Answer: repeated and more careful.

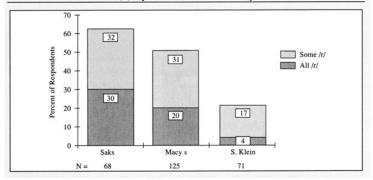


# William Labov: The Social Stratification of English in New York City (1966)

- ► Labov found that in New York City the pronunciation of /r/ occurred and its frequency of use depended on the speakers' membership to particular socioeconomic status groups, i.e. social classes.
- ➤ Speakers with higher socioeconomic status pronounced /r/ more frequently than those with lower socioeconomic status.

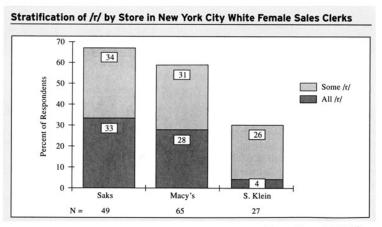






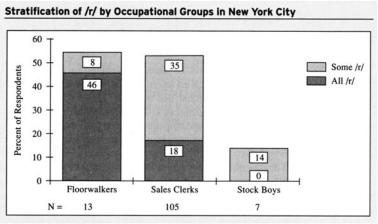
(Source: Finegan, 2004: 391)





(Source: Finegan, 2004: 392)

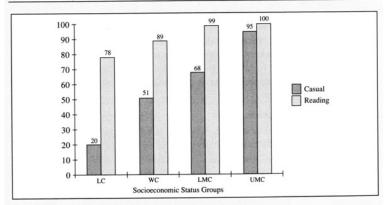




(Source: Finegan, 2004:393)



## Percent of -ing Suffix Pronounced as $/i\eta/$ by Four Socioeconomic Groups in New York City



(Source: Finegan, 2004: 394)

#### SEX/GENDER AND LANGUAGE CHANGE



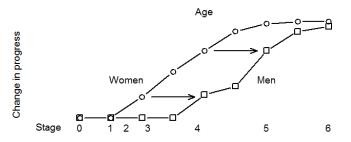
## Sex/Gender and language change

- ► Most of the linguistic changes in progress studied in the 2<sup>nd</sup> half of the 20th century show a high degree of social differentiation. (Labov 2002)
- ► Gender Paradox
  - ► Women conform more closely than men to sociolinguistic norms that are overtly prescribed, but conform less than men when they are not. (Labov 2001: 293)
- ► Male-dominated changes form a "small minority". (Labov 2001: 284)



# Sex/Gender and language change

► Male-dominated changes form a "small minority". (Labov 2001: 284)





### The Gender Paradox

- ▶ If a variant is not stigmatized (= prestige variants, socially accepted variants), women use it more than men of the same social class and age under the same circumstances.
- ▶ If a variant is stigmatized (= non-prestige variants, socially less favored variants), men use it more than women of the same social class and age under the same circumstances.

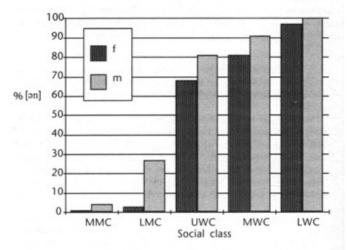


# The Gender Paradox: (ng) in Norwich

- ▶ The gender pattern was illustrated by Trudgill (1974) for the variable (ng) in his study of Norwich speech. (ng) has two variants in Norwich: the standard pronunciation  $/ {\rm i} \eta /$  and the non-standard pronunciation  $/ {\rm e} n /$ .
- ▶ In each of the socioeconomic status groups men score higher than women in their use of the non-standard variant  $/\partial n/$ . The class pattern is also shown: the higher the socioeconomic status, the less  $/\partial n/$  is used.



# The Gender Paradox: (ng) in Norwich



#### LANGUAGE AND SOCIAL NETWORKS



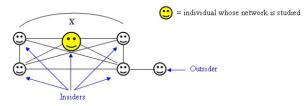
- ► The concept of the social network was introduced to the field of sociolinguistics by Lesley and James Milroy.
- ► Study of three working-class communities in Belfast, Northern Ireland (Belfast)
- Linguistic variation in these communities could be explained on the basis of differences in speakers' social network structures.
- ► There was a correlation between linguistic variation and a speaker's integration in a social network.



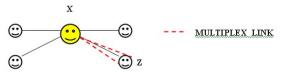
- ► The patterns of contact between network members construct different types of network structures (How many members know each other and how well do they know each other?) which can reveal an individual's integration into a network.
- ► The structure of a network can be determined by the factors of *density* and *multiplexity*.
  - Density: Number or quantity of social ties within a network (= how many members know each other)
  - Multiplexity: Quality of social ties (= how well the members know each other). Multiplexity refers to any factor or link that can deepen a social relationship, e.g. if two girls are not only sisters but also close friends and colleagues.



1.) High-density personal network structure (every member knows all the others)



 $\begin{tabular}{lll} \textbf{2.) Low-density personal network structure} & (individuals know the central member but not one another) \end{tabular}$ 





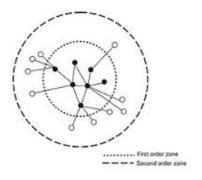




Figure 1. The 'dots-and-lines model' (based on Bergs 2005: 25)

Dr. Martin Schweinberger 477



- ► High-density, multiplex networks exhibit very conservative language use (resistance to change)
- ► Low-density, simplex networks exhibit very unstable language use (prone to change)
- ► Innovations are introduced through 2<sup>nd</sup> order network members



# Language and Identity Penelope Eckert: Jocks and Burnouts: Social Categories and Identity in the High School (1989)

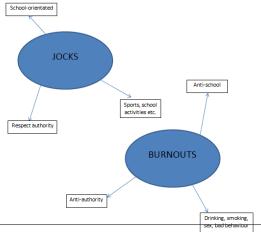


# Penelope Eckert: Jocks and Burnouts: Social Categories and Identity in the High School (1989)

- ➤ The fieldwork for this project took place between 1980 and 1982 and involved two years of ethnographic work in the Detroit suburb high-school "Belten Highand four other Detroit suburban schools.
- ► Hegemonic opposition between two social categories, referred to as *jocks* and *burnouts*.
  - ▶ Jocks are a school-oriented community of practice, embodying middle class culture.
  - Burnouts are a locally-oriented community of practice, embodying working class culture.



# Penelope Eckert: Jocks and Burnouts: Social Categories and Identity in the High School (1989)









Dr. Martin Schweinberger 482



# Penelope Eckert: Jocks and Burnouts: Social Categories and Identity in the High School (1989)

- Split between jocks and burnouts occurs in many schools across the country, sometimes corresponding to ethnic boundaries as well.
- ► Eckert found that people tend to speak more like their friends those who shared social practices together than others belonging in the same demographic category as them, i.e. social class.
- ► Variation correlates not only with category affiliation, but with practices associated with the category.



# Penelope Eckert: Jocks and Burnouts: Social Categories and Identity in the High School (1989)

IF YOU HAD TO OBSERVE THE LANGUAGE OF TWO PEOPLE FROM TWO VERY DIFFERENT SOCIAL GROUPS (SO DON'T SHARE SOCIAL PRACTICES), BUT FROM THE SAME SOCIAL DEMOGRAPHIC (AGE, ETHNICITY, CLASS), WHAT WOULD YOU EXPECT THE RESULT TO BE?



# Language and Identity Natalie Schilling-Estes: Gender-based patterns of language variation in Ocracoke English (1999)



# Language and Identity

► An analysis of the use of the iconic island vowel in high tide (/hortoid/ vs /hartaid/)

(/haitaid/ vs /haitaid/)
by gender and social group

in Ocracoke showed a clear-cut pattern in which middle-aged men who belonged to a male-exclusive group (*Poker Game Network*: PGN) and other social groups

Control of the contro



## Language and Identity

- ▶ PGN showed more extensive use of this vowel because they project a highly (traditionally) masculine image and pride themselves on speaking the authentic Ocracoke Brogue.
- ► Lowest rates among a middle-aged group of gay men for whom this vowel had little symbolic significance.
- ► Among adolescent speakers, women were much less likely to use this feature, since there is little real or symbolic capital for younger women.



# LANGUAGE AND ETHNIC IDENTITY WILLIAM LABOV: THE CASE OF THE BLACK ENGLISH TRIAL IN ANN ARBOR (1982)



# Difference (different varieties) vs Deficiency (deficient acquisition of standard variety)

- ► The Ann Arbor case was filed on behalf of parents whose children spoke AAVE, which parents and scholars contended was a distinct language with its own rules for pronunciation, grammar, and syntax.
- ▶ Parents were concerned with the procedures employed by the school district to assess their children, and the criteria used to place their children in special education, and in remedial education classes.
- ► The plaintiffs won by arguing that the procedures were inherently flawed and unfairly penalized their children because they failed to take into account differences in language and cultural background.



### Ethnic identity: AAVE

- ► There is a relationship between a speaker's ethnic group membership and the use of language.
- By applying specific structural features a speaker's linguistic variety can be used to express this speaker's ethnic identity.
- ➤ The applied structural features identify one's ethnic variety. These features include numerous grammatical, syntactical, morphological, and phonological differences from the standard variety of a language.



### Ethnic identity: AAVE

- ► In sociolinguistic literature, African-American Vernacular English (AAVE) is often mentioned in this connection as a specific ethnic variety of American English.
- ► AAVE has characteristic structural features which distinguish this variety from Standard American English and other non-standard varieties of the language.
- One such structural feature concerns the occurrence of multiple negation (see figure below) which is not restricted to AAVE alone but is used in this variety with a high frequency.



### Ethnic identity: AAVE

#### Introduction to Sociolinguistics

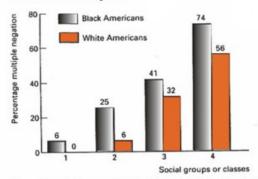


Figure 8.1 Multiple negation in black and white Detroit speech. (This diagram was constructed from data in Shuy, Wolfram and Riley 1967)

Dr. Martin Schweinberger 492



### Table of Contents

Overview

Semiotics

Language and the Brain

History of English

Di- - - - I - - -

Morphology

Syntax

Semantics

Semantics

Pragmatics

Sociolinguistics and Language Change

Language Acquisition and Language Learning



# Language Acquisition and Language Learning

#### Today's topics and terms

- Definitions
- Child Language
- Development
- ► L2/Ln Acquisition
- ► ESL and EFL

#### FIRST LANGUAGE ACQUISTION



#### **Definitions**

- ► First Language (L1; language acquisition) any language that is acquired as a first language (in bi- or multilinguals this may be more than one language)
- ► Second Language (L2; language learning) any language that is acquired or learned after the L1 (irrespective of mode, i.e. whether naturally or in a classroom setting)
- ► Foreign Language (FL; language learning) (any language that is learned and not acquired - typically in a class room setting)
- ► Target Language (TL)
  any language that is targeted in an acquisition or learning
  context



# Characteristics of Child language

Language development shows a high degree of similarity across languages and cultures all over the globe

- Predictability (of terms of stages and errors)
- ► Learning through imitation (initial; later generalization)
- Creativity (children generate novel phenomena)



### Before first words...

- ► Involuntary crying
- ► Cooing and gurgling (showing happiness or satisfaction)
- ▶ Babbling Babies use sounds reflecting the characteristics of the language that surrounds them

# Around 12 month (one-word stage)

- ▶ one or two recognizable words per utterance
- ► Single-word sentences
- ► Speech acts and content words



# Around 24 month (two-word stage)

- ▶ at least 50 different words
- ▶ telegraphic sentences (no function words and grammatical morphemes; e.g. "Mommy juice" or "Baby fall down")
- ► reflecting word order of language (e.g. "Kiss baby" and "Baby kiss")
- creatively combining words (e.g. "more outside" or "all cookie gone")



### Around 48 month children are able to...

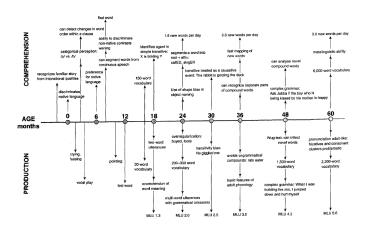
- ask questions
- ▶ give commands
- ► report real events
- create stories about imarinary events
- correct word order and grammatical markers (not perfect)



### Around 48 to 60 month children are able to...

- ► basic structure of the language in place
- ► rapid growth of vocabulary
- less frequent and more complex linguistic structures
- use of language in a widening social environment
- ► development of metalinguistic awareness







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